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EVALUATION AND PREDICTION OF HENRY'S LAW CONSTANTS AND AQUEOUS SOLUBILITIES FOR SOLVENTS AND HYDROCARBON FUEL COMPONENTS
VOL II: EXPERIMENTAL HENRY'S LAW DATA

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

Laboratory measurements of Henry's law constants are reported for 51 chemicals spanning a wide range of chemical structures and volatilities. A static headspace method (Equilibrium Partitioning in Closed Systems, referred to as EPICS) was used to measure Henry's Law Constant, with the standard batch air-stripping method used as a check. An average precision of 5 percent was obtained for the EPICS runs, and the Henry's law constants agreed reasonably well (within 10 percent) with the batch air-stripping results and other reported experimental values. Measurements were conducted over a temperature range of 10-30°C, and the data were correlated with a temperature regression equation coupled with a temperature-dependent error term based on 95 percent confidence limits. The aqueous solubilities of the study compounds were also determined via the shake-flask method at temperatures of 10, 20, and 30 degrees Celsius. Finally, the results of this study were incorporated into a thermodynamic correlation (UNIFAC), based on chemical structure, which allows the prediction of Henry's law constants and aqueous solubilities for a wide variety of pure compounds and mixtures. (Cont'd)

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ITEM 19. ABSTRACT (Cont'd)

in dilute aqueous solutions. Volume II: Experimental Henry's Law Data (Volume II of III)

This report is presented in three volumes. Volume I contains the technical discussion and fabulated values of Henry's law constants and aqueous solubilities. Volume II contains the experimental Henry's law data. Volume III contains the experimental solubility data and the Fortran source code for the simplex UNIFAC parameter fitting and the interactive program for calculating Henry's law constants and aqueous solubilities.

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EXECUTIVE SUMMARY

The Installation Restoration program (IRP) underway at numerous Air Force bases has identified several sites with contaminated soil and groundwater. This subsurface contamination is the result of fuels, cleaning solvents, and degreasers entering the subsurface environment from accidental spills, leaking storage tanks, and past disposal practices. HQ AFESC/RDVW is conducting research aimed at developing treatment strategies for groundwater cleanup, and studying the fate and transport of contaminants in subsurface systems. Many of the contaminants of concern are volatile by nature, and a knowledge of their air-water distribution and aqueous solubility is needed to assess the compounds treatability and to support the basic laboratory studies.

The objectives of this research were to develop Henry's law constants and aqueous solubilities as a function of temperature, for a variety of organic compounds of Air Force concern (Table 1). Secondary objectives were to determine what effect mixed organics, in an aqueous solution, exhibit on individual Henry's law constants and evaluate various methods used to predict Henry's law constants.

This report documents experimentally determined values of Henry's law constants and aqueous solubility for 51 compounds of Air Force concern. The report is presented in three volumes. Volume I contains the technical discussion and tabulated values of Henry's law constants and aqueous solubilities. Volume II and III contain all the raw data and the fortran source code for an interactive program used to predict the chemical parameters.

Many of the contaminants of concern are volatile by nature, and a knowledge of their air-water distribution is required for the design of treatment processes and for providing insight into their environmental fate and transport. A static headspace method (Equilibrium Partitioning In Closed Systems, referred to as EPICS) was used to measure the Henry's law constants, with the standard batch air stripping method used as a check.

The Henry's constants were determined as a function of tempertaure from 10 to 30 $^\circ$C (Table 11) and these values were then used to generate temperature regression equations (Table 8). Generally speaking the EPICS' results from this study agree well with other published results (Table 12). However, for many of the compounds reported here, confirmed values of Henry's constant do not exist in the literature, and if they do, values are rarely reported as a function of temperature with rigorous statistics.

Solubility data for organic compounds in water are important for environmental studies because they provide fundamental information necessary to predict transport in aqueous systems. This data may also be used to predict carbon sorption of contaminants, and the air-or steam-stripping behavior for a given compound. The aqueous solubility of the 51 study

compounds were determined at 10, 20, and 30°C (Table 14). Three different methods were used, but the majority of the data were collected using a shake-flask technique. Although the solubilities were not a strong function of temperature over the range studied (i.e., 10-30 °C), several general trends were noted. First, the solubility of the halongenated hydrocarbons increased with temperature. Second, the solubility of the substituted aromatic hydrocarbons increased with temperature. Finally, maxima and minima are observed for a wide range of compounds without any general trend that can be demonstrated to be statistically significant.

Groundwater contamination is often characterized by the presence of several different contaminants rather than one single compound. For this reason, studies were conducted to determine whether the presence of other compounds would affect the Henry's law constant of a single compound. Deviations from ideal behavior were observed (pg 52), but confirming experiments were not performed. Although the results were not conclusive, the project team believes the observed interactions were real and reproducible.

It would not be feasible to experimentally determine Henry's law constants for all chemical compounds. There will be times when a Henry's law constant is needed but an experimentally determined value is not reported and the situation does not permit a laboratory study to determine the constant. For this reason, a technique to accurately estimate Henry's constant using a minimum of physiochemical properties would be useful. Three different thermodynamic techniques for correlating experimental Henry's law constants were examined (page 61). The techniques were examined to determine their applicability to environmental systems and their predictive capacity for unmeasured multicomponent systems. The UNIFAC method proved to be the most effective way of utilizing the data base developed during this project. At computer algorithim to fit the current data to a new environmental UNIFAC binary interaction data base was developed and a portion of the experimental data collected was incorporated into this new data base. The new data base creates improvement in the predictions generated by UNIFAC in the dilute concentration regime (Figures 13 through 16).

PREFACE

This report was prepared by the Research Triangle Institute, Research Triangle Park NC 22707, under Contract No. F08635-85-C-0054. The AFESC/RDVW Project Officer was Captain Richard A. Ashworth.

The report documents Henry's law constants and aqueous solubilities, as a function of temperature, for 51 compounds of Air Force concern. The study was performed between February 1985 and September 1986.

This report is presented in three volumes. Volume I contains the technical discussion and the tabulated values of Henry's law constants and aqueous solubilities. Volume II contains the experimental Henry's law data. Volume III contains the experimental solubility data and the Fortran source code for the simplex UNIFAC parameter fitting and the interactive program for calculating Henry's law constants and aqueous solubilities.

Mention of trademarks and trade names of material and equipment does not constitute endorsement or recommendation for use by the Air Force, nor can the report be used for advertising the product.

This report has been reviewed by the Public Affairs Office (PA) and is releasable to the National Technical Information Service (NTIS). At NTIS, it will be available to the general public, including foreign nationals.

This technical report has been reviewed and is approved for publication.

RICHARD A. ASHWORTH, Capt, USAF, BSC   LAWRENCE D. HOKANSON, Lt Col, USAF
Project Officer   Director, Engineering and Services
                                              Laboratory

THOMAS J. WALKER, Lt Col, USAF, BSC
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are included in this volume. Keywords:
Water pollution Soil contamination

APPENDIX A

SUMMARY OF LITERATURE SEARCH

This is a self-contained document with its own internal style which, varies from our format.

SUMMARY OF LITERATURE SEARCH FINDINGS

The literature search initiated for this project may be divided into three main areas: (1) methodologies for measuring or estimating Henry's Law constants; (2) techniques for determining aqueous solubilities of volatile organics; and (3) group contribution correlations for VLE prediction. A thorough computer keyword search was supplemented by a manual investigation of the literature. Data bases used in the computer phase of the search include NTIS, COMPENDEX, CHEMICAL ABSTRACTS, WATERNET, POLLUTION ABSTRACTS, ENVIROLINE, and BIOSIS PREVIEWS.

A number of articles were found concerning Henry's Law constants for volatile organic compounds. The major measurement techniques discussed in the literature to date are inert gas stripping (batch air stripping in a bubble-purge column) and headspace methods such as EPICS. Procedures also exist for estimating Henry's Law constant from theoretical considerations and/or component physical property data, with particularly widespread use currently being made of crude, often highly suspect values calculated from the ratio of the organic's vapor pressure to its aqueous solubility limit. Finally, articles were found covering headspace analysis of trace organics, headspace concentration methods such as the purge-and-trap technique, and continuous organic extraction of aqueous samples. The latter two subjects are of importance to this project since they can be used to overcome detection limit problems and allow GC injection of non-aqueous liquid samples, respectively. Experimental Henry's constant and solubility data obtained during this study

will be compared to values given in the comprehensive listing of Mackay and Shiu (1981).

Methodologies for aqueous solubility measurement found in the literature fall into three categories: High Performance Liquid Chromatography (HPLC) generator column analysis, nephelometry (turbidity measurements), and the "shake-flask" technique which involves GC headspace analysis or UV liquid-phase detection. Shake-flask analysis, according to various authors, is accurate but time-consuming (several hours of liquid sample equilibration time are required), while the HPLC method, with a large bead surface area for organic-water contact, has a run time of only a few minutes. In this project, nephelometry will be used to check the experimental solubilities for selected chemicals arrived at by the shake-flask and HPLC methods.

The final major grouping of articles from the literature search centers around group contribution (chemical structure) correlations for trace organic physical properties. Procedures exist at present for calculating such quantities as activity coefficients in multicomponent aqueous solutions, pure component organic saturation pressures, and octanol-water partition coefficients. The type of correlation envisioned for this project would be similar in form and usage to the UNIFAC (UNIquac Functional-group Activity Coefficient) activity coefficient model described by Fredenslund, et al. (1975). Isolation of the individual functional group influences on partitioning behavior for various homologous series will be accomplished using the method for octanol-water partition coefficients given in the definitive paper by Leo, et al. (1971). If necessary, other correlation forms found in the literature, such as a nomograph or a correlation of Henry's constant against known physical properties, will be tried in an effort to satisfy Air Force prediction requirements.

The following literature listing summarizes the articles collected to date from the combined computer and manual literature search. Additional articles of interest to the Air Force have been ordered, and the list will be updated as they are received.

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APPENDIX B

SUMMARY OF EPICS RESULTS

SUMMARY OF EPICS RESULTS

Calculated statistical quantities in this Appendix include the coefficient of variation (relative standard deviation) for all replicate Henry's law constant observations; the temperature regression parameters (slope and y-intercept) and associated correlation coefficient for each component; and the Student's "T"-test confidence bands for both the raw data and the temperature regression predictions. Appropriate temperature regression and confidence interval plots have been generated to present the data graphically.

Divided according to component, the data analysis information for each chemical consists of the following:

- Two-page tabulation of the injection peak areas, Henry's law constant estimates, and Coefficient of Variation (COV) values for the component at five temperatures (10, 15, 20, 25 and 30°C)

- Temperature regression plot (ln H versus 1/T)

- Plot showing the 95 percent confidence band on the temperature regression predictions

- Plot illustrating the 95 percent confidence limits (lower and upper) on the averages of the estimates calculated at each temperature.

All of this information is presented in this Appendix for 48 of the original 51 compounds of interest. Notice, however, that the temperature regression plot and associated confidence band plot for component 102 (n-hexane) have been omitted from this compilation. This is because the negligible temperature dependence of the raw data rendered the regression analysis meaningless.

A brief discussion of the phenol results is also warranted here because the measured Henry's law constants are significantly higher than other published data. This observation is explained by recalling that phenol self-associates strongly in aqueous solution even at low environmental concentrations. Equilibrium air-water partitioning of phenol therefore consists of competing equilibria: equilibrium between the phenol monomer and phenol "chains" in the liquid phase, and air-water distribution of the monomer. The EPICS technique measures the air-water partitioning of the monomer only; calculated ratios of vapor pressure to aqueous solubility are based instead on the bulk liquid-phase phenol concentration. In other words, calculated Henry's law constants for highly nonideal chemicals such as phenol will be much lower than experimental values because the overall solubility limit is typically much higher than the true monomer solution concentration. A good model of equilibrium partitioning behavior in such systems should include a realistic representation of the multiple equilibria involved.

Serial Dilution Results with Example Curves

COMPONENT ID INDEX AND SERIAL DILUTION RESULTS

Component ID Number	Component Name	Serial Dilution Correlation Coefficient (r^2)
1 01	n-nonane n-nonane	0.998
2	n-hexane	0.998
102	n-hexane	
3	2-methylpentane	1.000
103	2-methylpentane	
4	cyclohexane	0.998
5	1,2-dichlorobenzene	1.000
105	1,2-dichlorobenzene	
6	chlorobenzene	0.999
7	1,3-dichlorobenzene	0.997
107	1,3-dichlorobenzene	
8	1,4-dichlorobenzene	0.997
108	1,4-dichlorobenzene	
9	o-xylene	0.998
10	p-xylene	0.998
11	m-xylene	0.997
12	propylbenzene	0.997
13	ethylbenzene	0.990
113	ethylbenzene	
14	toluene	1.000
15	benzene	0.982
16	phenol	0.864
17	methyl ethylbenzene	0.998
18	1,1-dichloroethane	1.000
19	1,2-dichloroethane	1.000
119	1,2-dichloroethane	0.9993
20	1,1,1-trichloroethane	0.999
21	1,1,2-trichloroethane	0.998
121	1,1,2-trichloroethane	
22	cis-dichloroethylene	0.996
23	trans-dichloroethylene	0.995
24	tetrachloroethylene	1.000
25	trichloroethylene	1.000
26	naphthalene	0.997
27	tetralin (1,2,3,4-tetrahydronaphthanele)	0.996
127	tetralin	
28	decalin	0.989
128	decalin	
29	anthracene	-----
30	vinyl chloride	1.000
130	vinyl chloride	
31	chloroethane	0.999
32	hexachloroethane	0.992
132	hexachloroethane	

Component ID Number	Component Name	Serial Dilution Correlation Coefficient (r^2)
33	carbon tetrachloride	0.999
34	1,3, 5-trimethylbenzene (mesitylene)	0.997
35	bis (2-ethylhexyl)phthalate (dioctyl phthalate)	-----
36	ethylene dibromide	1.000
136		0.9996
37	1, 1-dichloroethylene (vinylidene chloride)	0.996
38	methylene chloride	0.9993
50	methylene chloride	0.9997
39	chloroform	0.9998
49	chloroform	0.9932
43	1,1,2,2-tetrachloroethane	0.9921
44	1,2-dichloropropane	0.9999
45	dibromochloromethane	0.9990
46	1,2,4-trichlorobenzene	0.9989
47	2,4-dimethylphenol	0.9316
51	1,1,2-trichlorotrifluoroethane	0.9953
52	methyl ethyl ketone (MEK)	0.9970
152	methyl ethyl ketone (MEK)	
53	methyl isobutyl ketone (MIBK)	0.9878
153	methyl isobutyl ketone (MIBK)	------
54	methyl cellosolve	------
55	bis (2-chloroethyl) ether	------
56	trichlorofluoromethane	------

SERIAL DILUTION CURVE

hexane

Volume of sat. stock solution, (ml)

□ Actual response

—— Calc: r-sq.= 0.9984

FID Integrator Response (Millions)

24
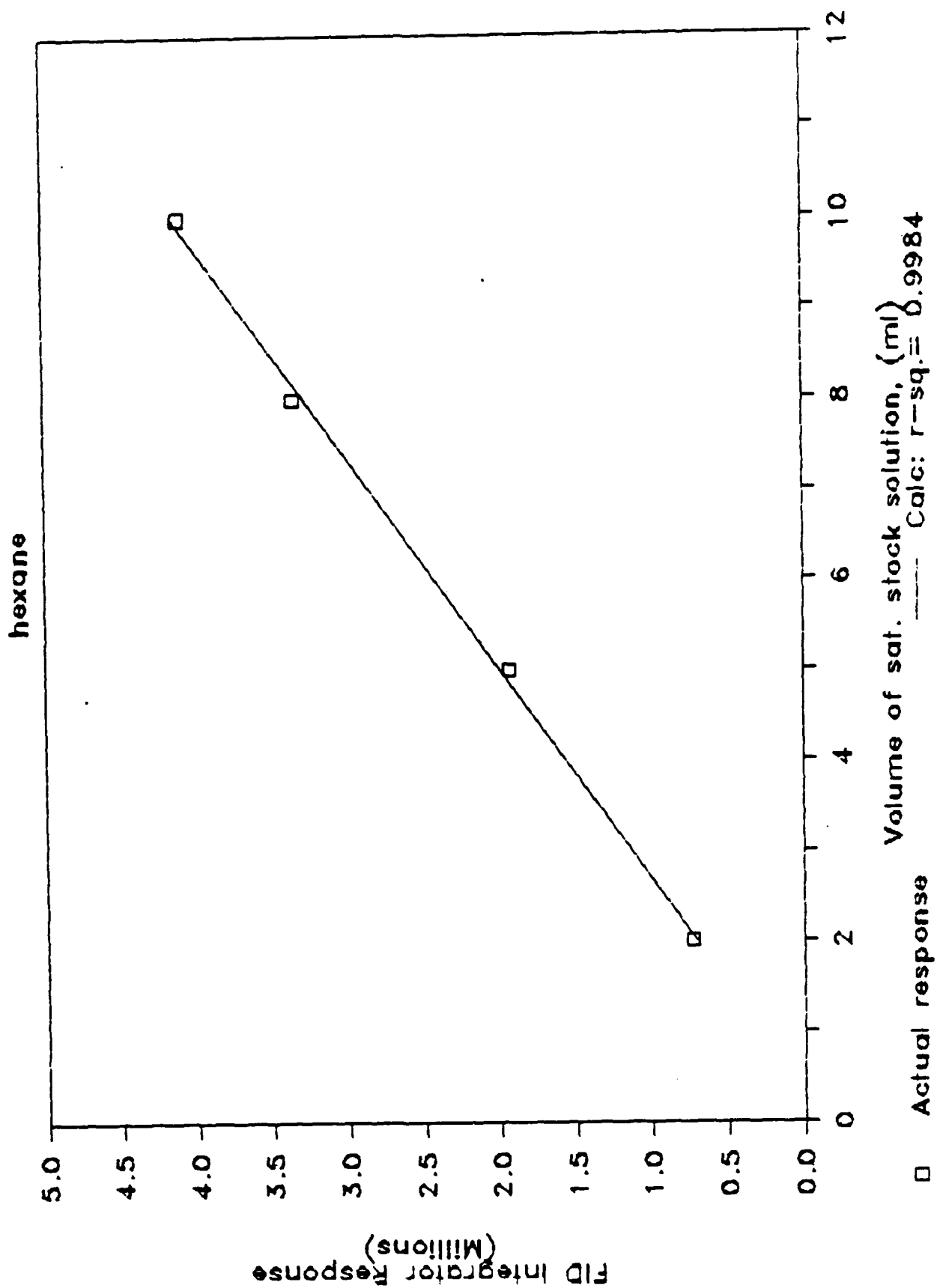
SERIAL DILUTION CURVE
Chlorobenzene

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)
Calc: r-sq.= 0.9991

□ Actual response

25
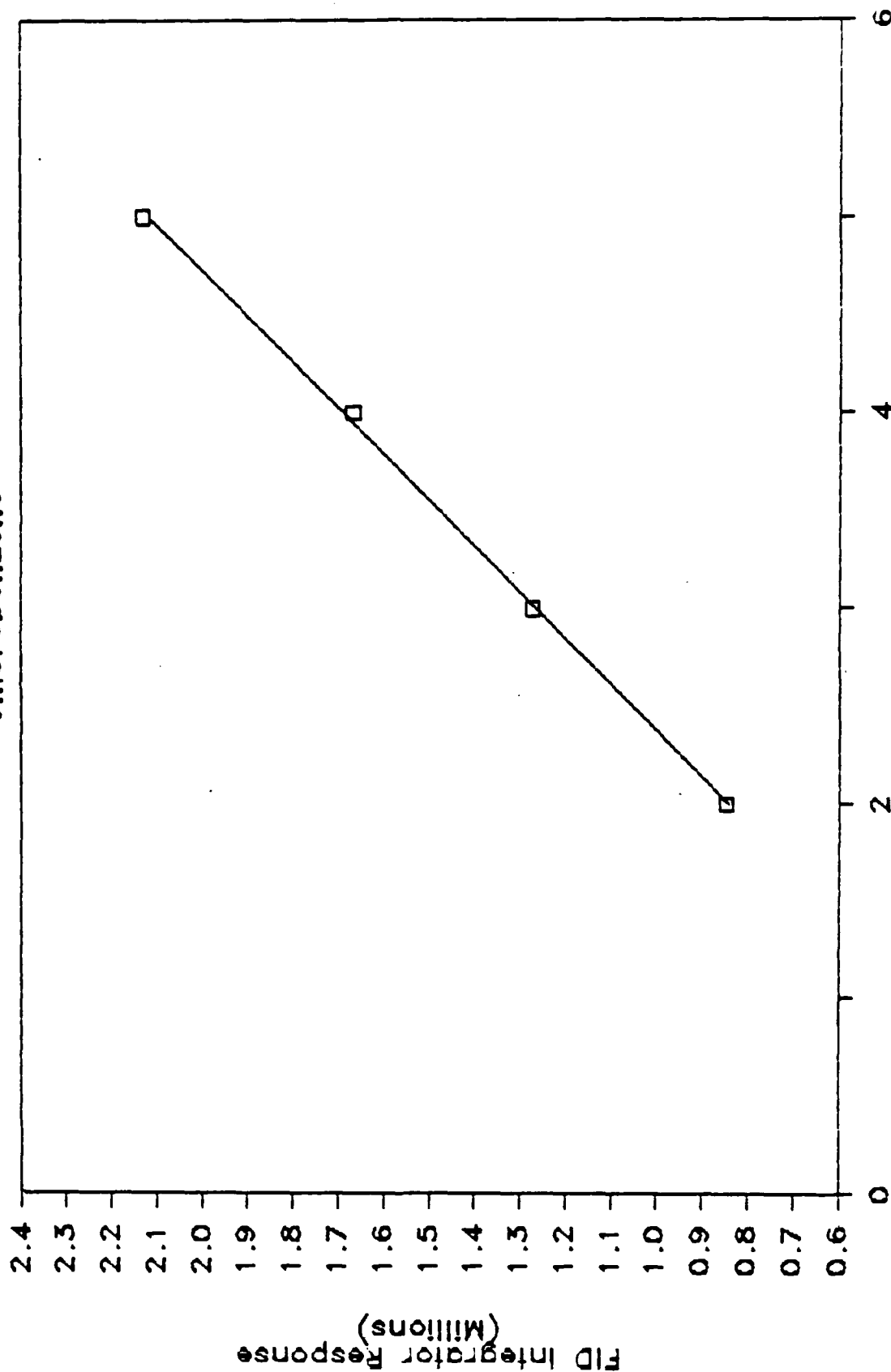
SERIAL DILUTION CURVE

p-Xylene

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)

□   Actual response

——— Calc: r-sq.= 0.9987

SERIAL DILUTION CURVE

Phenol

FID Integrator Response (Thousands)

Volume of sat. stock solution, (ml)

□ Actual response

—— Calc: r–sq.= 0.8645

27
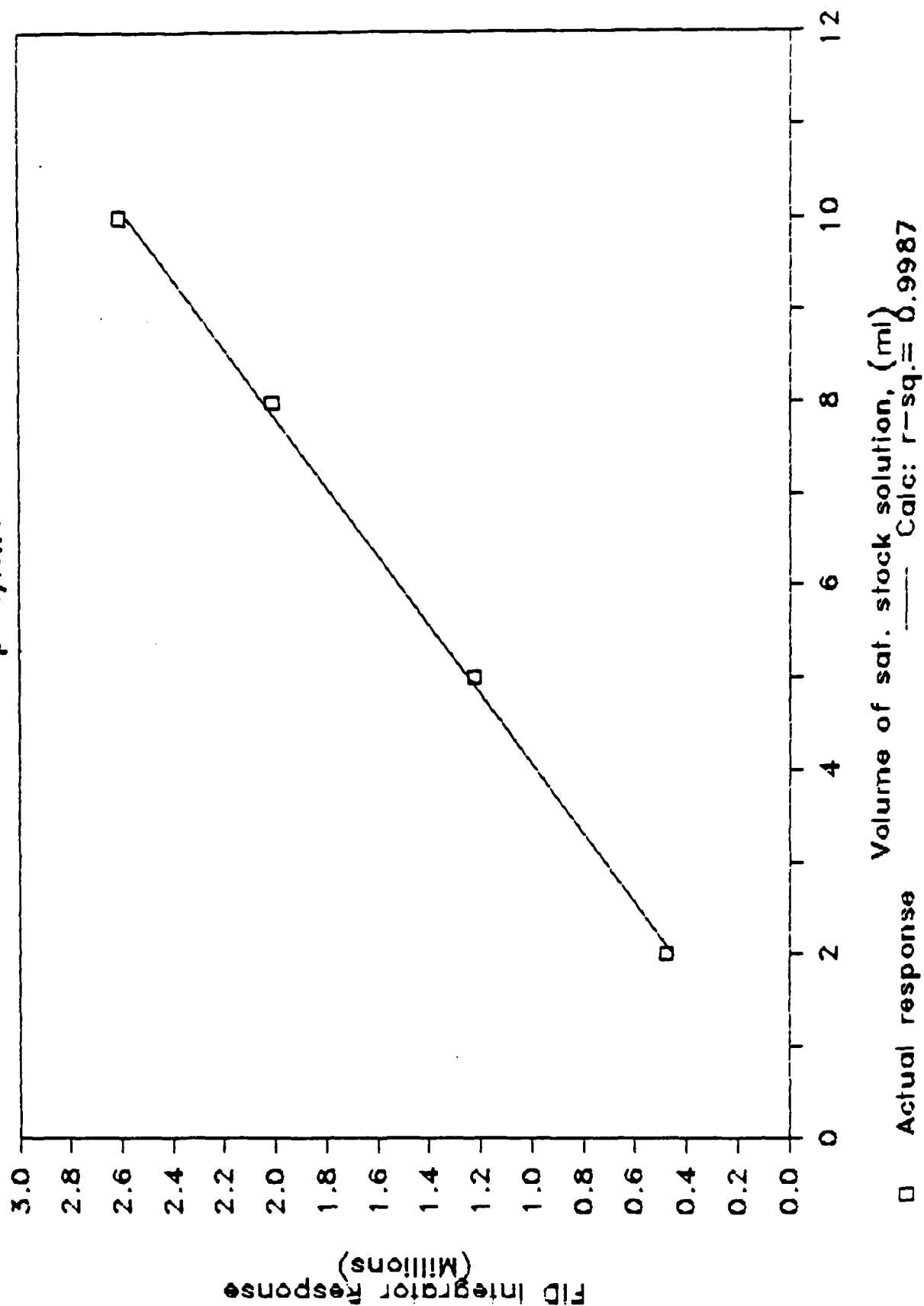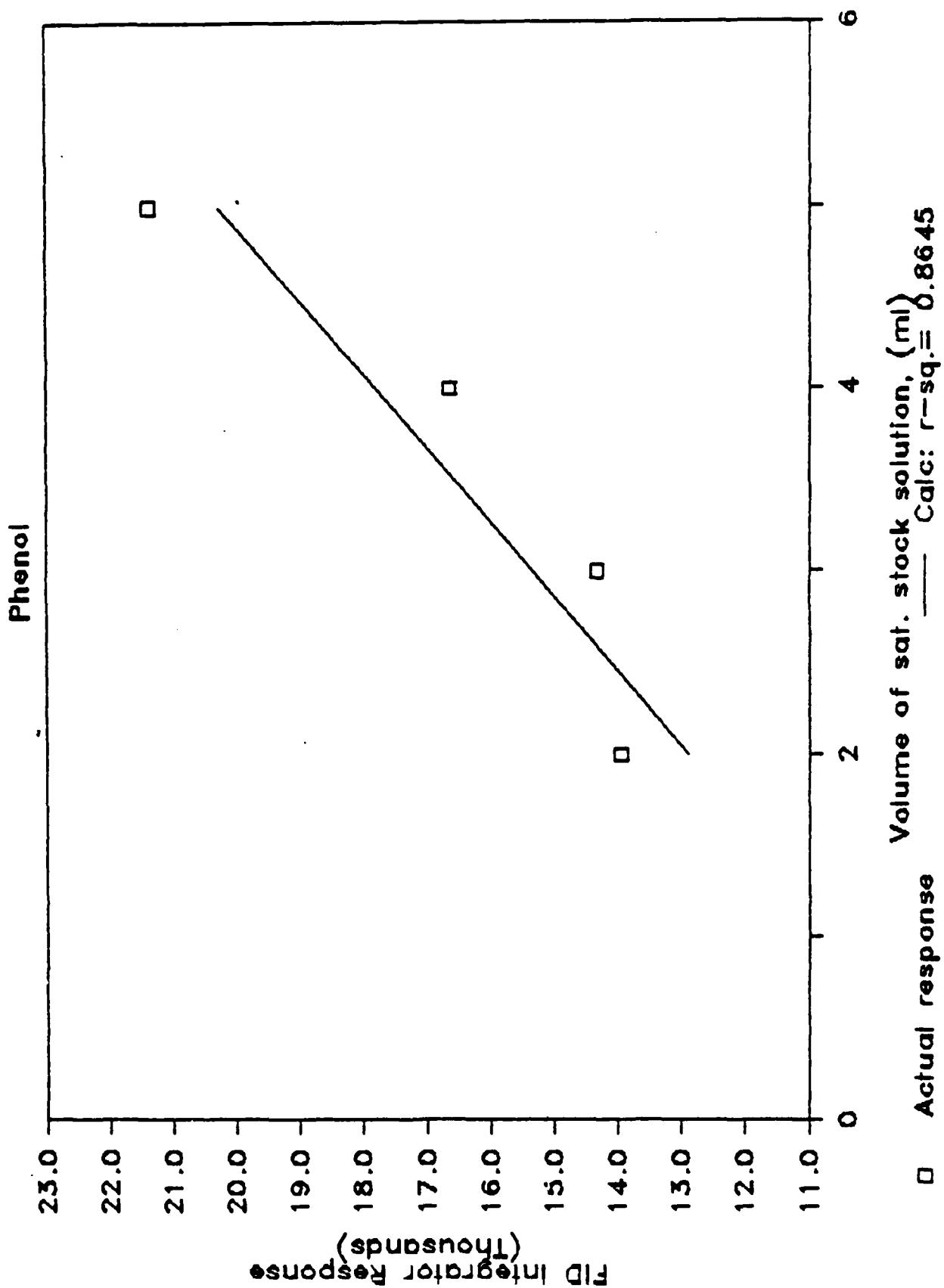
SERIAL DILUTION CURVE
1,1,1-Trichloroethane

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)
Calc: r-sq.= 0.9994

□ Actual response

28
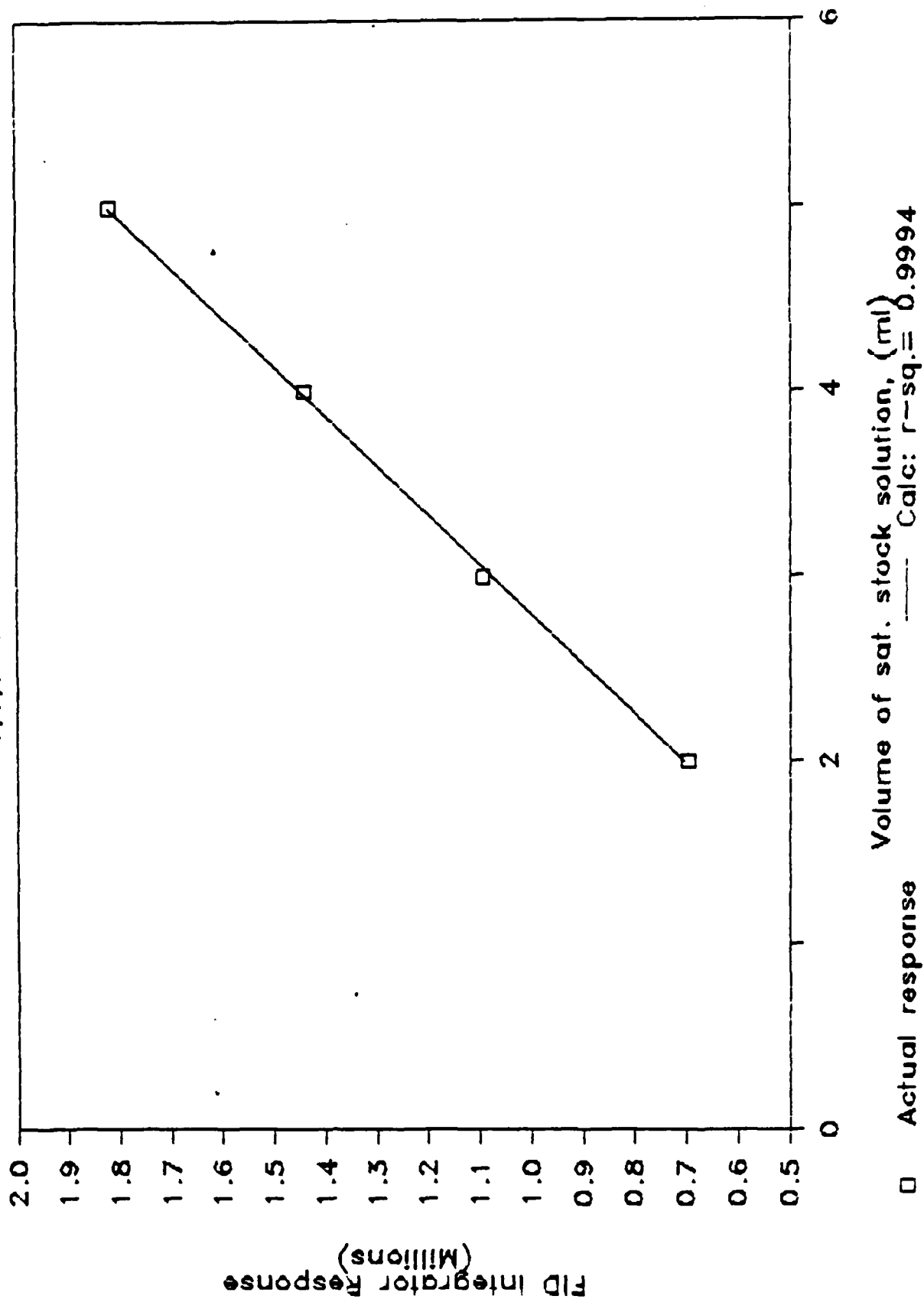
SERIAL DILUTION CURVE
Trichloroethylene

FID Integrator Response (Thousands)

900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0

Volume of sat. stock solution, (ml)

□ Actual response
—— Calc: r-sq.= 0.9998

29

SERIAL DILUTION CURVE
Decalin

FID Integrator Response (Thousands)

Volume of sat. stock solution, (ml)

□ Actual response   —— Calc: r—sq.= 0.9891

30
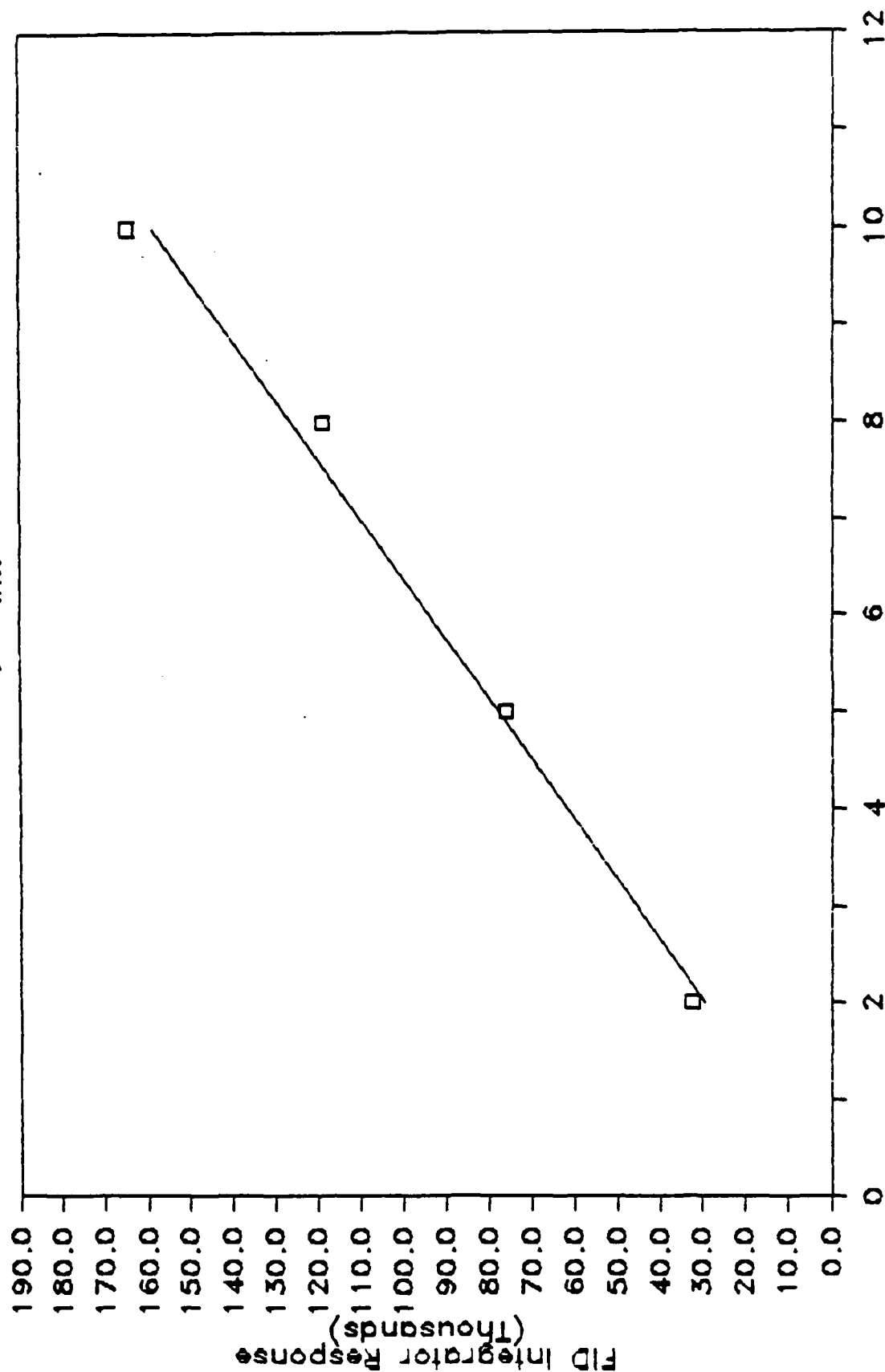
SERIAL DILUTION CURVE
Vinyl Chloride

FID Integrator Response (Millions) vs. Volume of sat. stock solution, (ml)

□ Actual response
—— Calc: r—sq.= 1
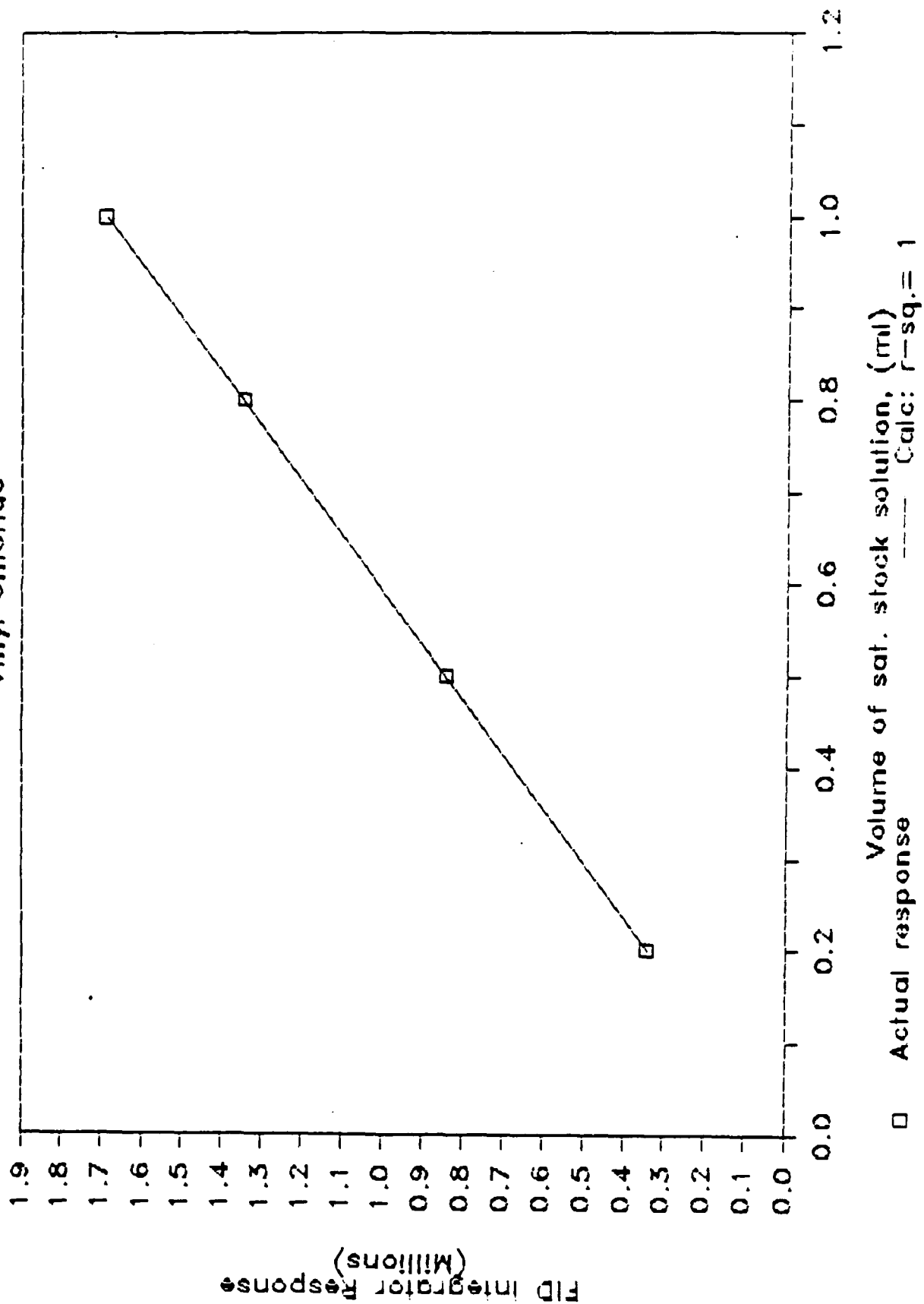
SERIAL DILUTION CURVE

Chloroethane

FID Integrator Response (Millions)
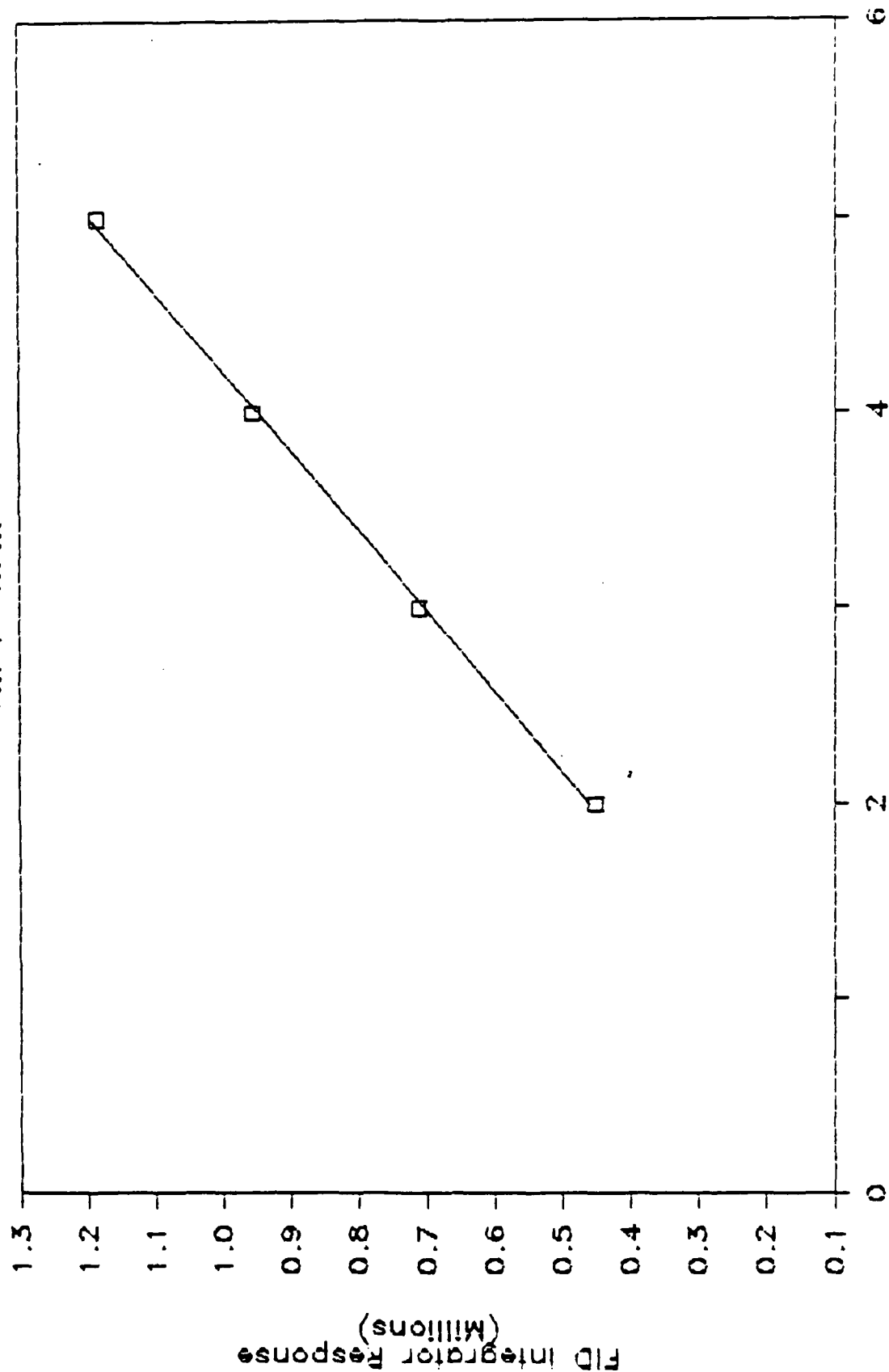
Volume of sat. stock solution, (ml)

Calc: r-sq.= 0.9992

□ Actual response

32

SERIAL DILUTION CURVE

Hexachloroethane

33

SERIAL DILUTION CURVE

Carbon Tetrachloride

Volume of sat. stock solution, (ml)
Calc: r—sq.= 0.9992

FID Integrator Response (Thousands)
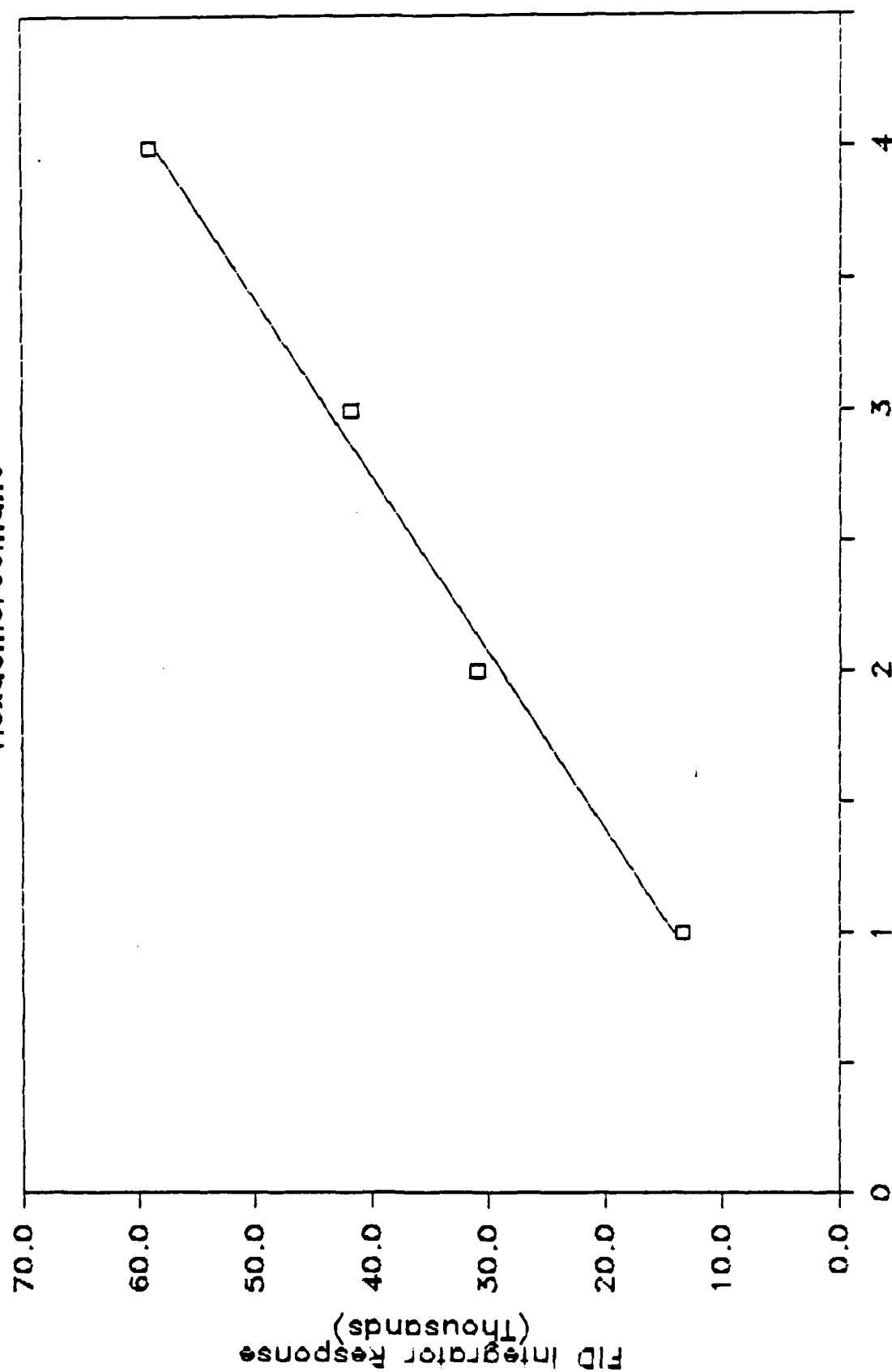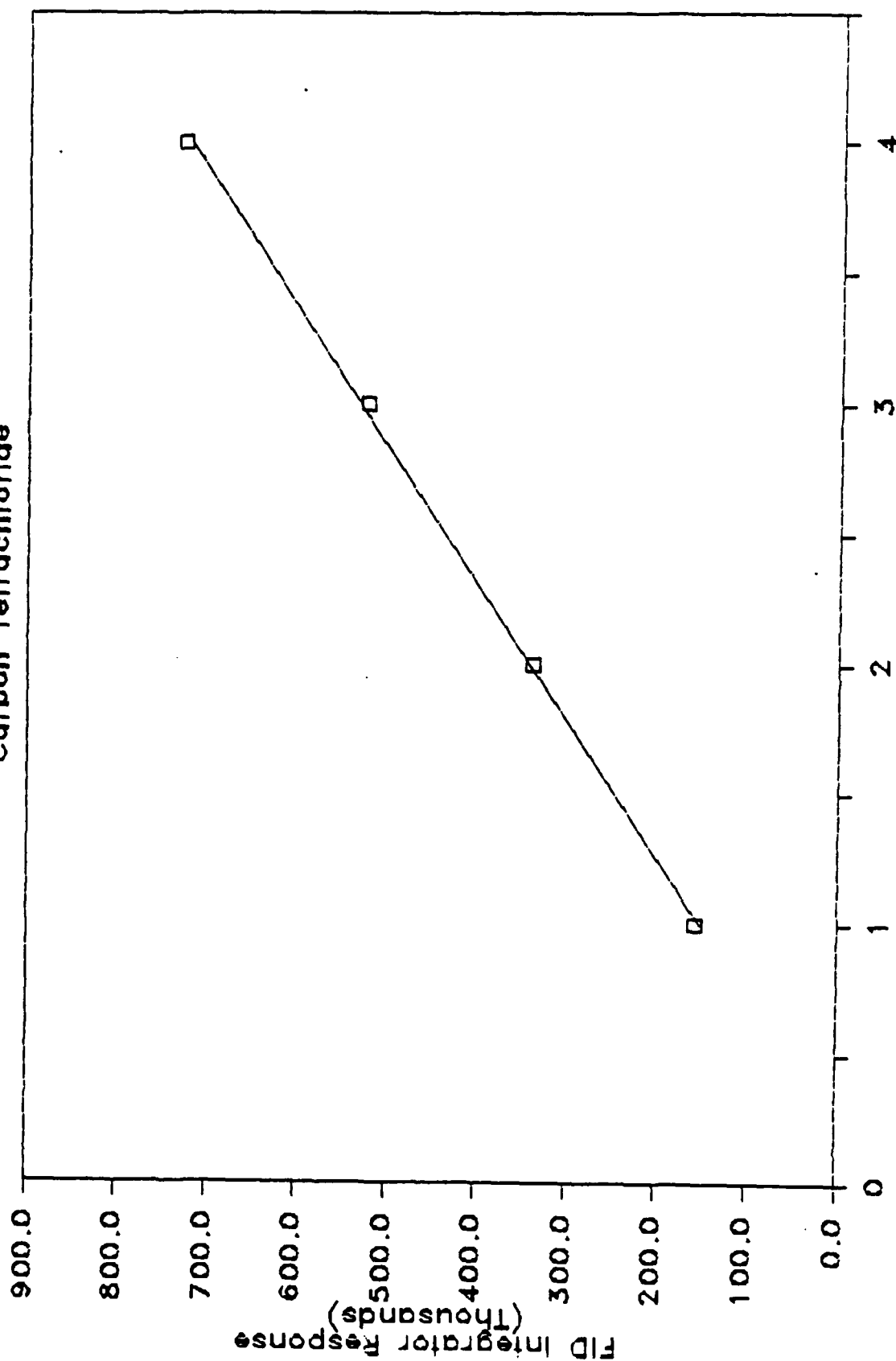
□ Actual response

SERIAL DILUTION CURVE
1,1-Dichloroethylene

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)
Calc: r-sq.= 0.9967
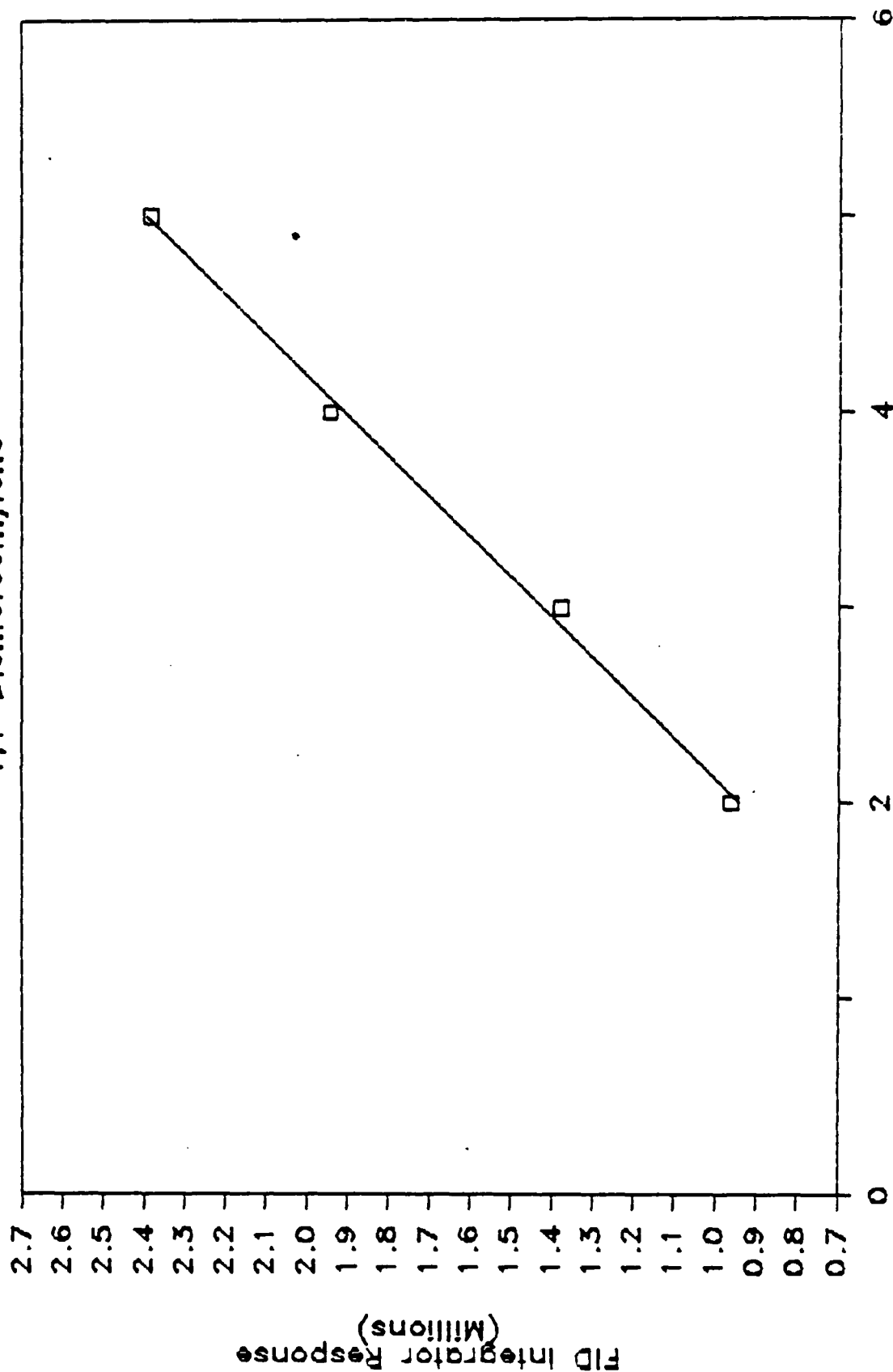
□ Actual response

—— Calc: r-sq.= 0.9967

35

SERIAL DILUTION CURVE

Methylene chloride

Volume of sat. stock solution, (ml)

□ Actual response

——— Calc: r-sq. = 0.9993

FID Integrator Response (thousands)

SERIAL DILUTION CURVE

Chloroform

FID Integrator Response (Thousands)

Volume of sat. stock solution, (ml)

Calc: r-sq.= 0.9998

□   Actual response

37
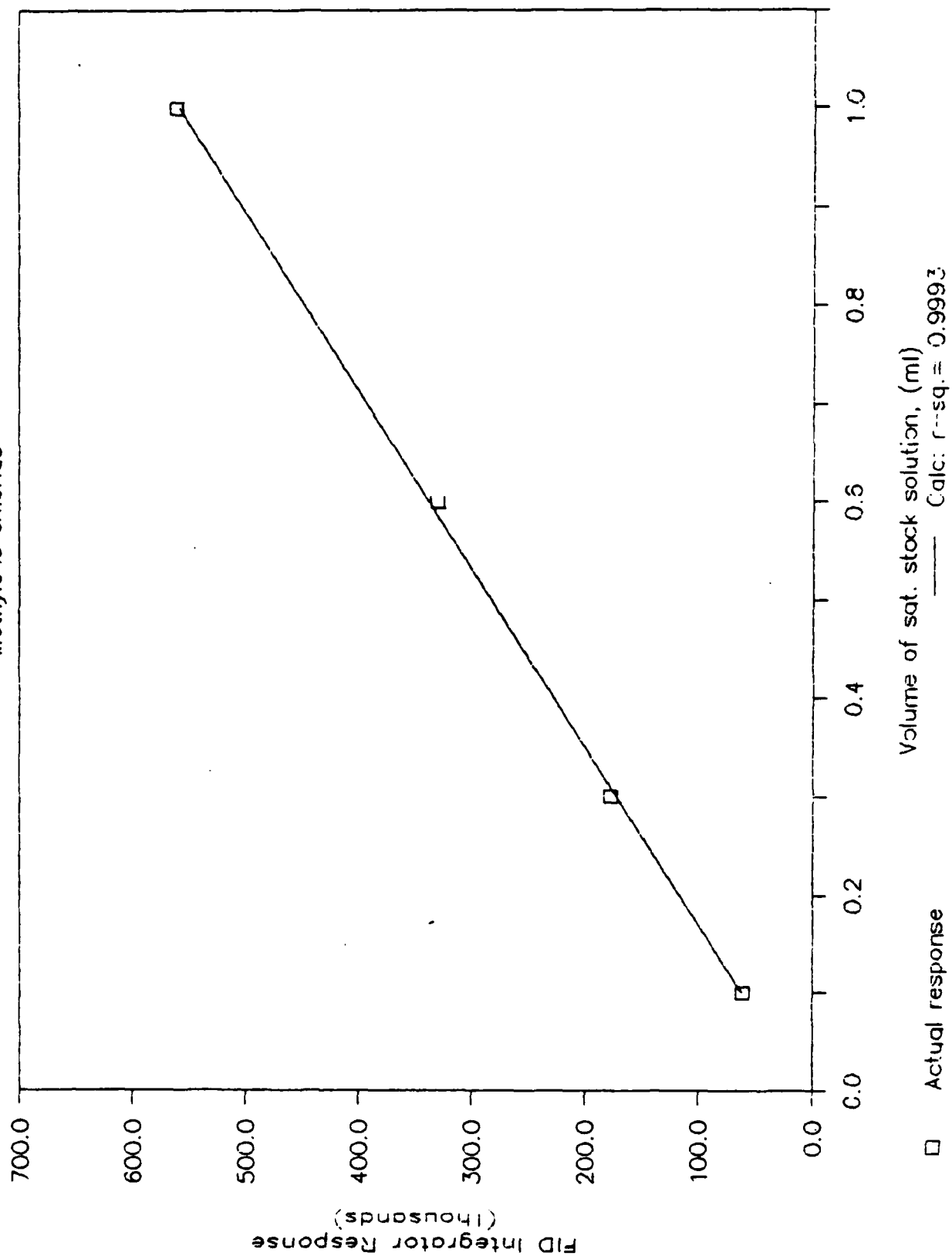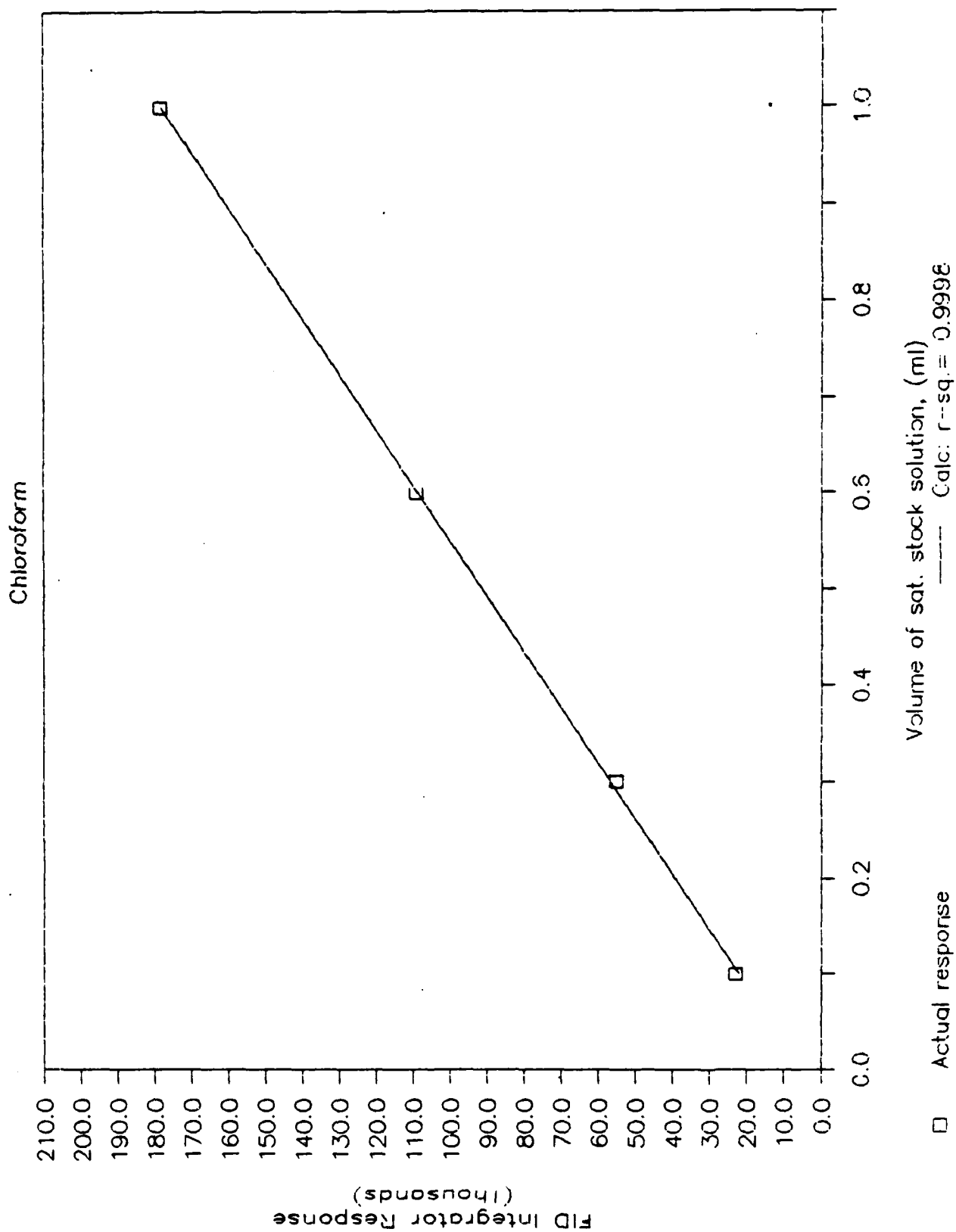
SERIAL DILUTION CURVE

1,1,2,2-Tetrachloroethane

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)

□   Actual response

——   Calc: r-sq.= 0.9921

38

SERIAL DILUTION CURVE

1,2-Dichloropropane

FID Integrator Response
(Millions)
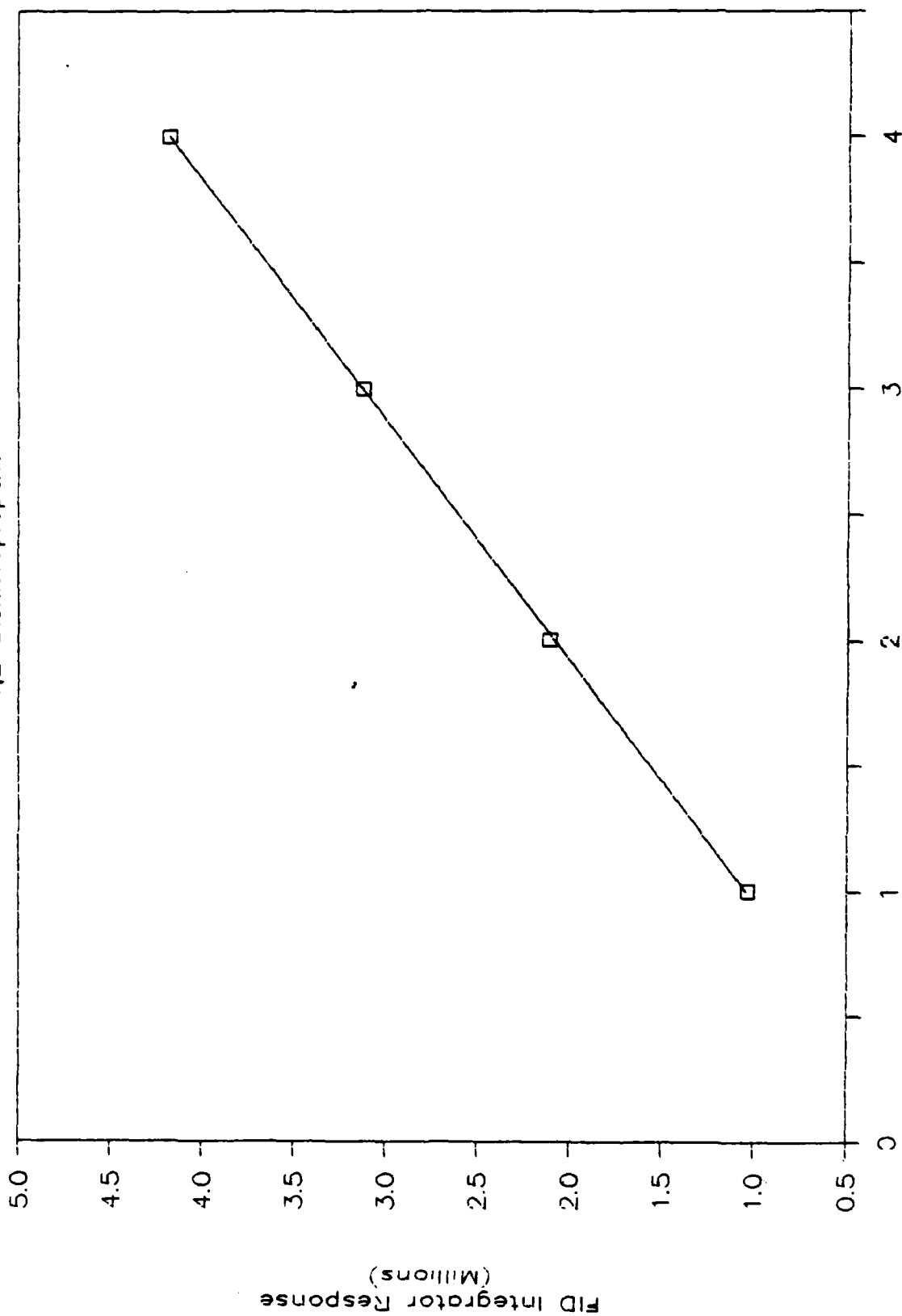
Volume of sat. stock solution, (ml)

□   Actual response

——   Calc: r-sq.= 0.9999

39

SERIAL DILUTION CURVE

Dibromochloromethane

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)

□ Actual response

—— Calc: r-sq.= 0.999

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SERIAL DILUTION CURVE

1,2,4-Trichlorobenzene

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)

□ Actual response   —— Calc: r-sq. = 0.9989

41
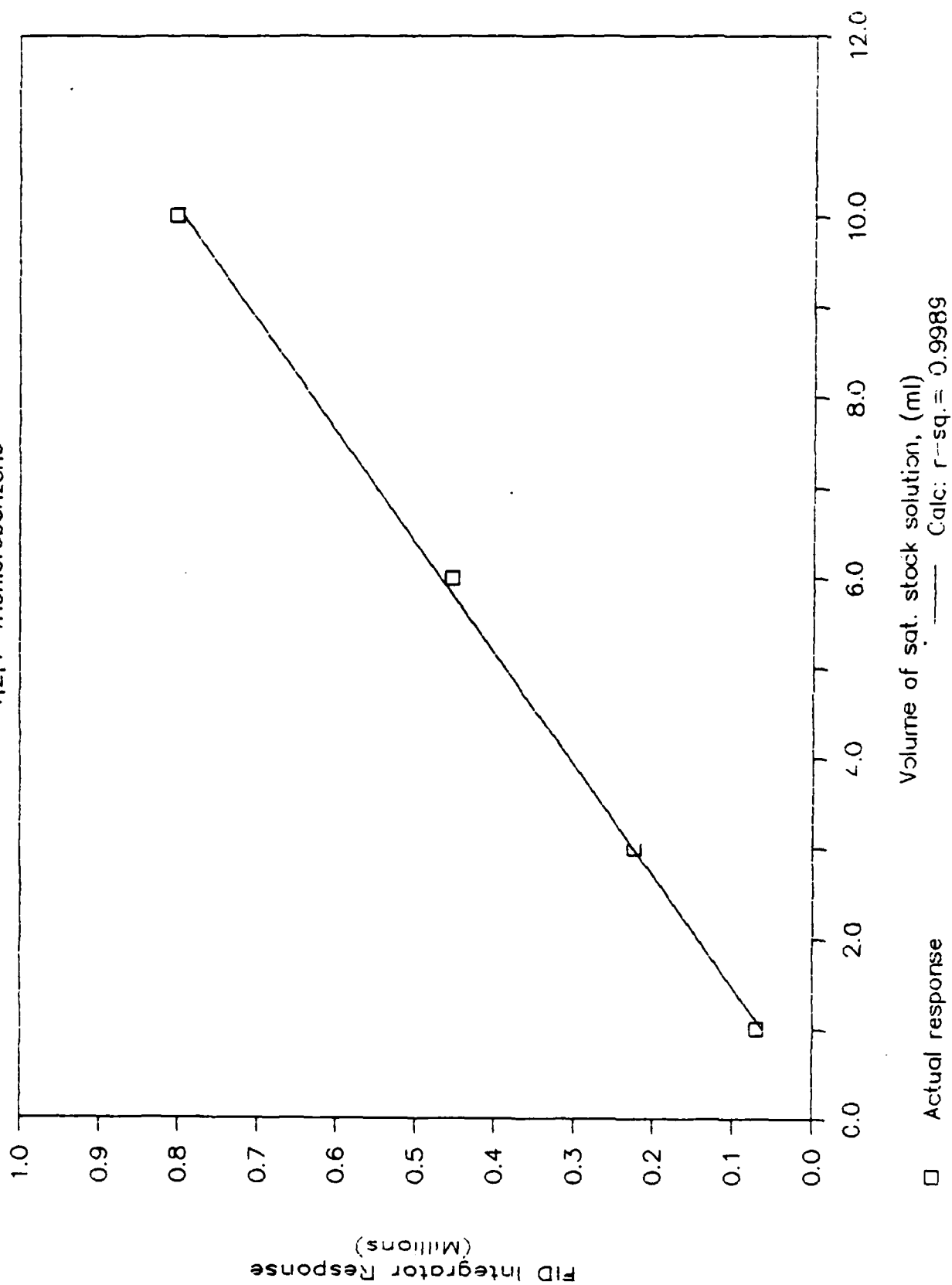
SERIAL DILUTION CURVE

2,4-Dimethylphenol

FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)

□   Actual response

——   Calc: r-sq. = 0.93'6

42
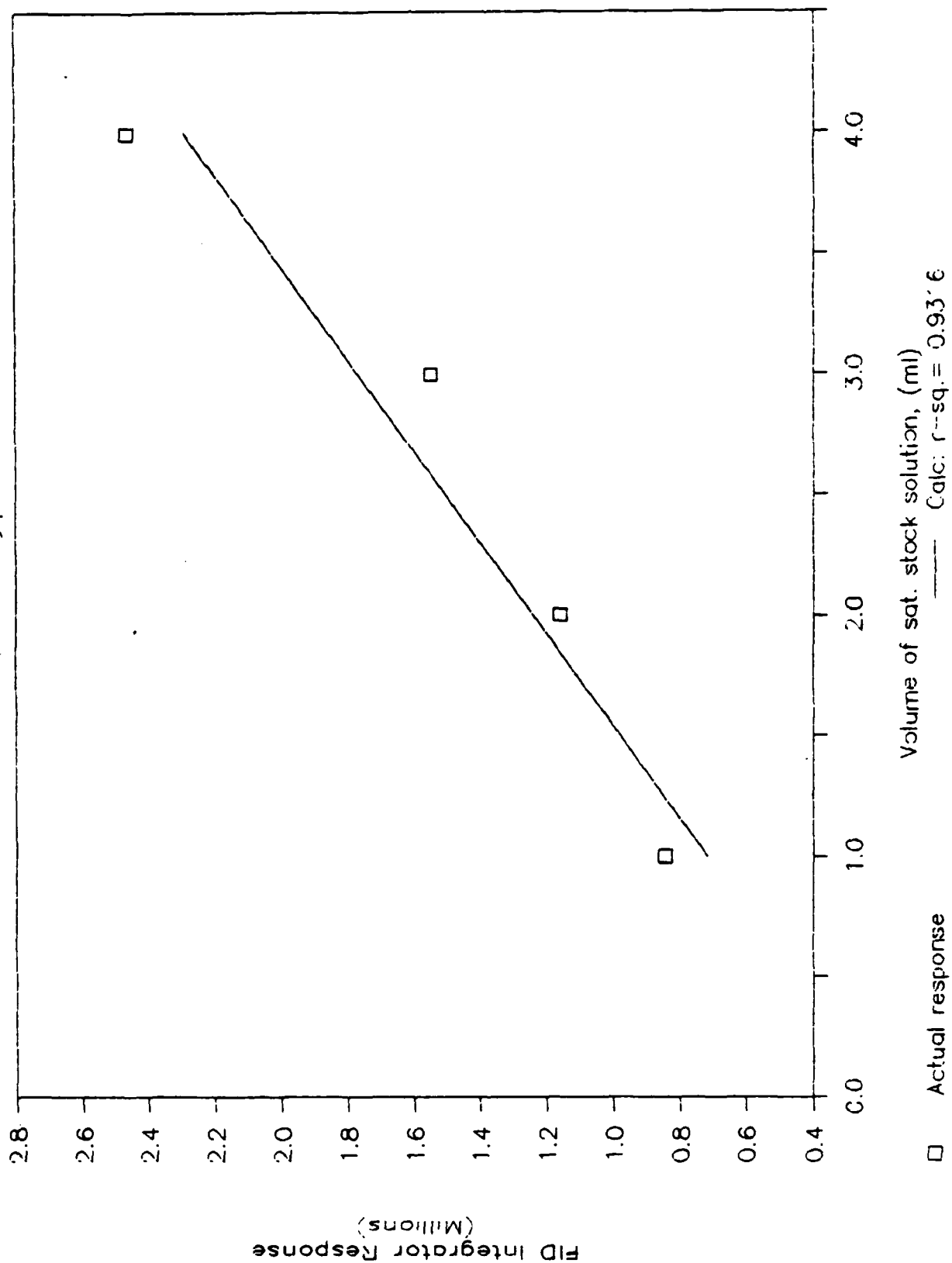
SERIAL DILUTION CURVE

1,1,2-Trichlorotrifluoroethane

FID Integrator Response (Millions)

2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6

0   2   4   6
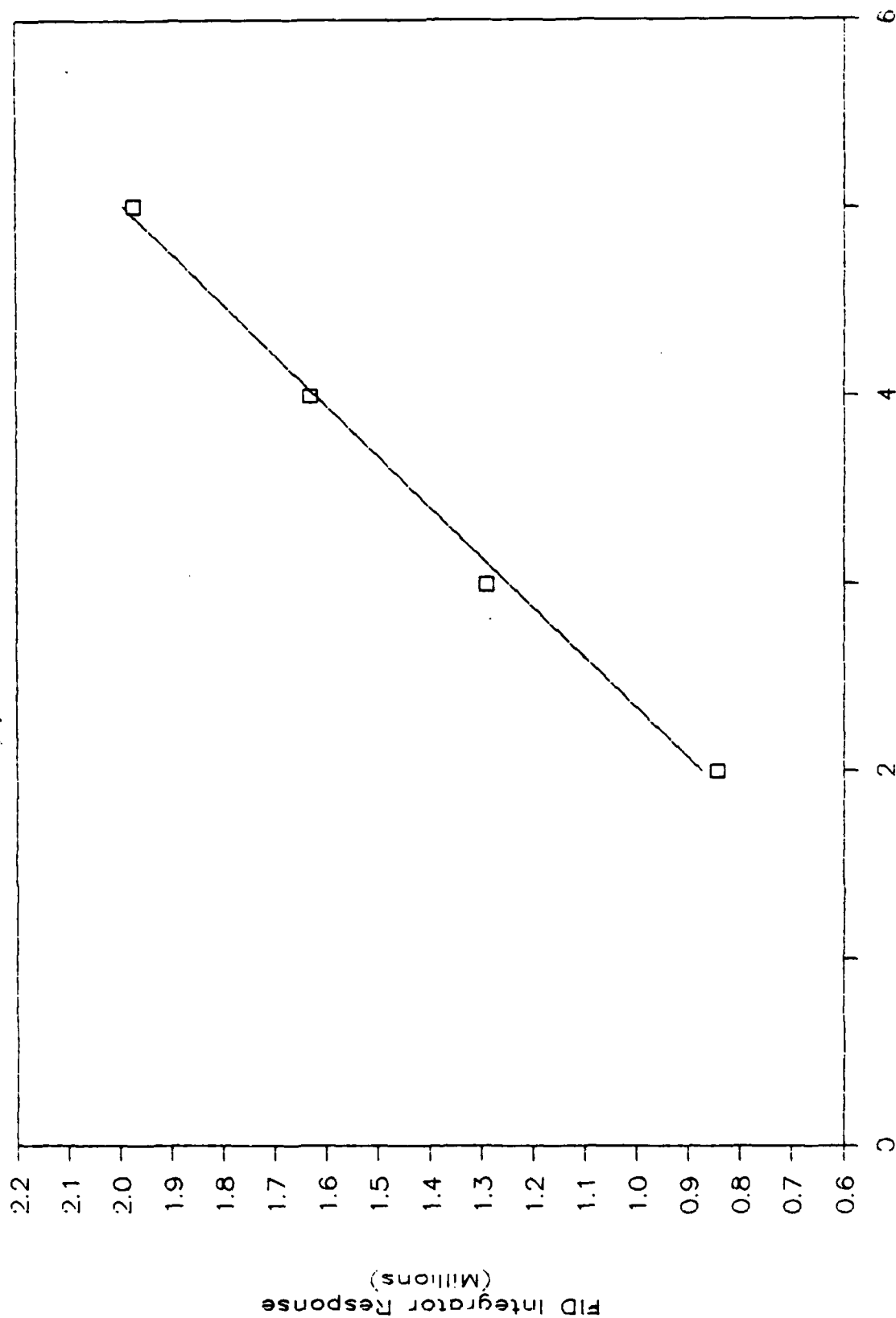
Volume of sat. stock solution, (ml)

Calc: r-sq. = 0.9953

□   Actual response

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SERIAL DILUTION CURVE

Methyl ethyl ketone
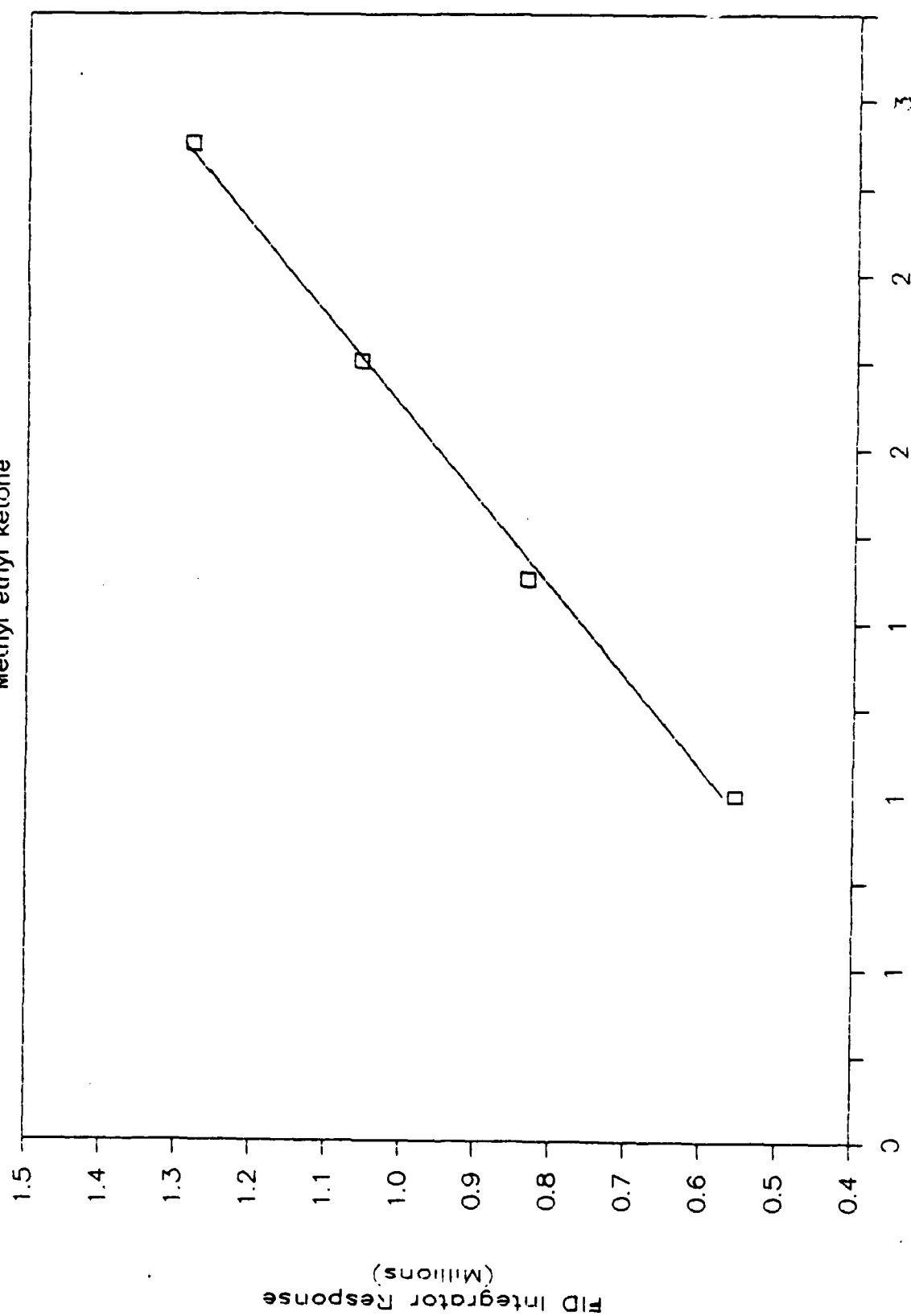
Volume of sat. stock solution, (ml)

Calc: r-sq.= 0.997

FID Integrator Response (Millions)

Actual response

44

SERIAL DILUTION CURVE

Methyl isobutyl ketone
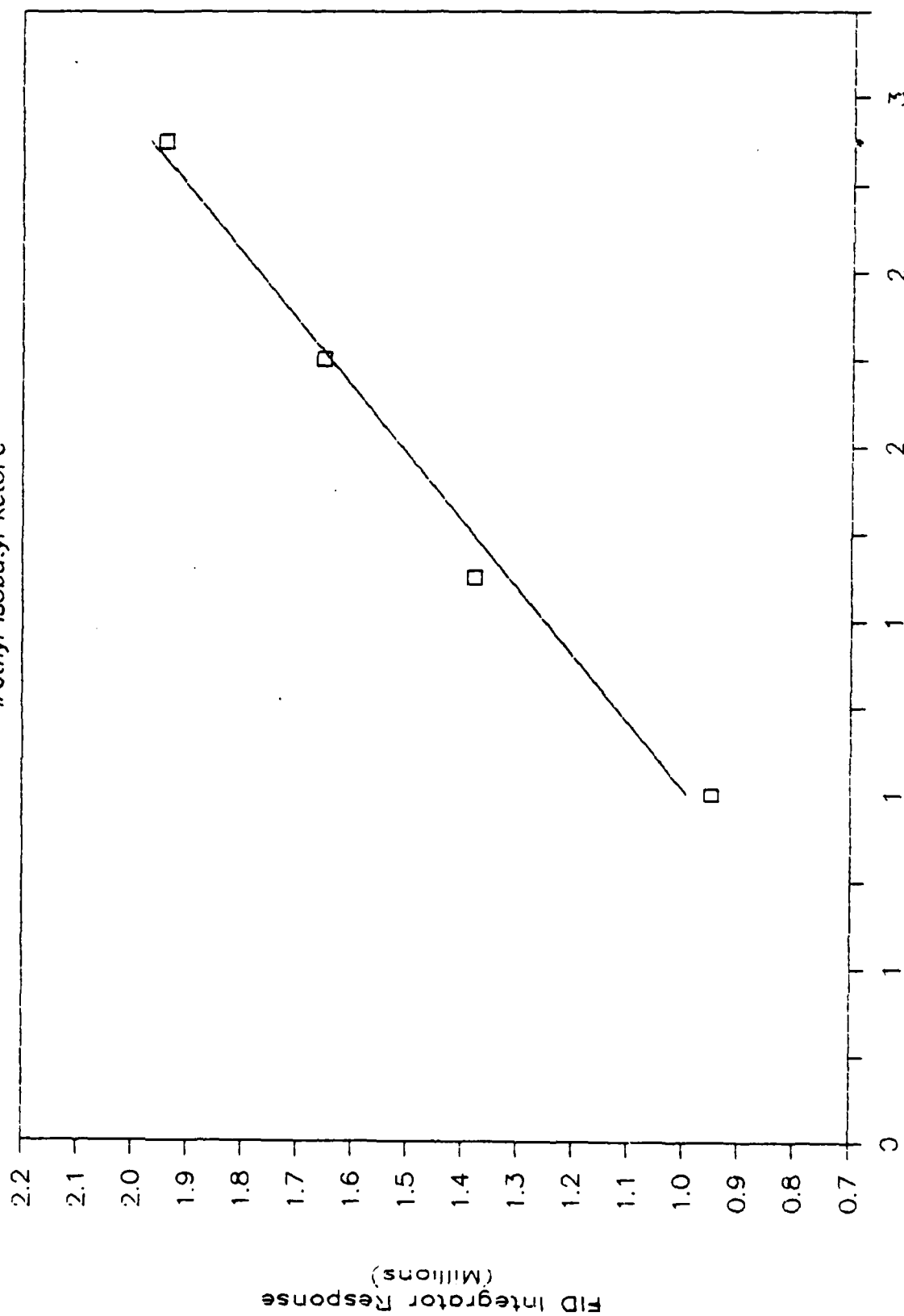
FID Integrator Response (Millions)

Volume of sat. stock solution, (ml)

—— Calc: r-sq.= 0.9878

□ Actual response

45

Component Data

		Temperature 1		Temperature 2		Temperature 3	
RUN Number —)		2		2		3	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		1		1		1	
Component ID		1		1		1	
Temperature (C)		10		15		20	
Low Vol (ml)		30		30		30	
High Vol (ml)		210		210		210	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		14.4460	1.0E-25	16.6177	1.0E-25	32.7919	1.0E-25
H, avg:atm-mol/mol		18631.0		21810.3		43785.5	
H, avg: atm-m3/mol		3.36E-01	1	3.93E-01	1	7.89E-01	1
H, avg: kPa-m3/mol		34.0104		39.8141		79.9291	
COV, r [std/mean]		15.59		19.64		62.96	
COV, both replic.		———		———		———	
Observation:	(1)	13.8845		13.6479		37.1622	
[atm-m3/m3]	(2)	17.3798		13.9520		60.1730	
	(3)	11.9400		19.1588		15.1897	
	(4)	14.5788		19.7121		18.6428	
Injection:	(1)	161500		259680		306200	
[Peak Area]	(2)	154840		281430		261140	
	(3)	40073		64730		63322	
	(4)	37936		64352		60409	

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	Temperature 4		Temperature 5	
RUN Number ---)	3		3	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2
Group No.	1		1	
Component ID	1		1	
Temperature (C)	25		30	
Low Vol (ml)	30		30	
High Vol (ml)	210		210	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	19.7111	1.0E-25	33.6200	1.0E-25
H, avg: atm-mol/mol	26768.1		46422.5	
H, avg: atm-m3/mol	4.82E-01	1	8.36E-01	1
H, avg: kPa-m3/mol	48.8644		84.7429	
COV, r [std/mean]	22.13		61.56	
COV, both replic.	------		------	
Observation: (1)	22.2479		50.5776	
[atm-m3/m3] (2)	24.5110		52.4824	
(3)	15.4631		15.6022	
(4)	16.6222		15.8179	
Injection: (1)	180140		449010	
[Peak Area] (2)	166660		373070	
(3)	40235		89870	
(4)	39540		89572	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -3.5E+03

Y-INTERCEPT   =   1.1E+01

R-SQUARED   =   0.6165

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TEMPERATURE REGRESSION PLOT

Component 1

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.6165

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95% CONFIDENCE TEST
Component 1

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

50
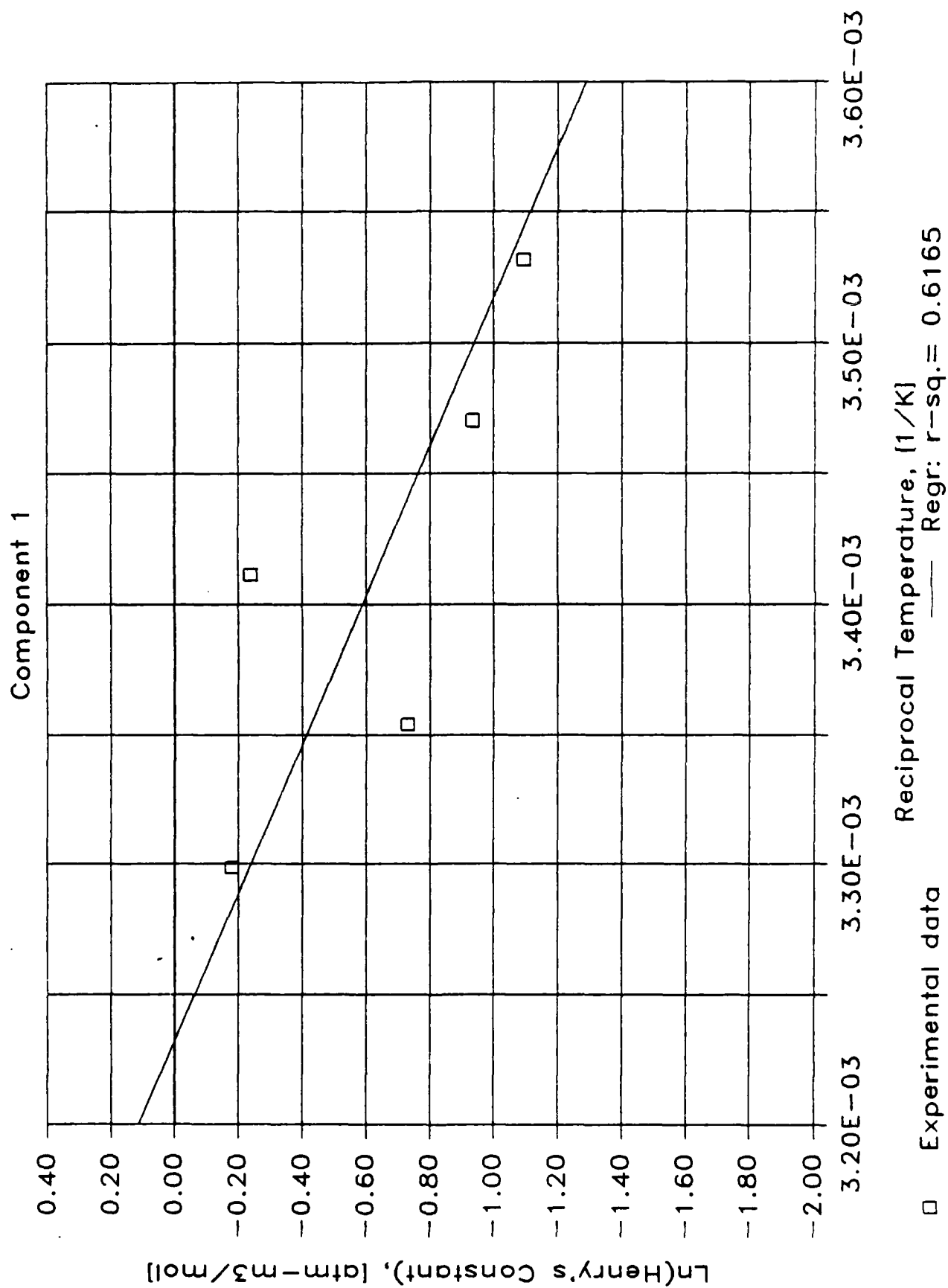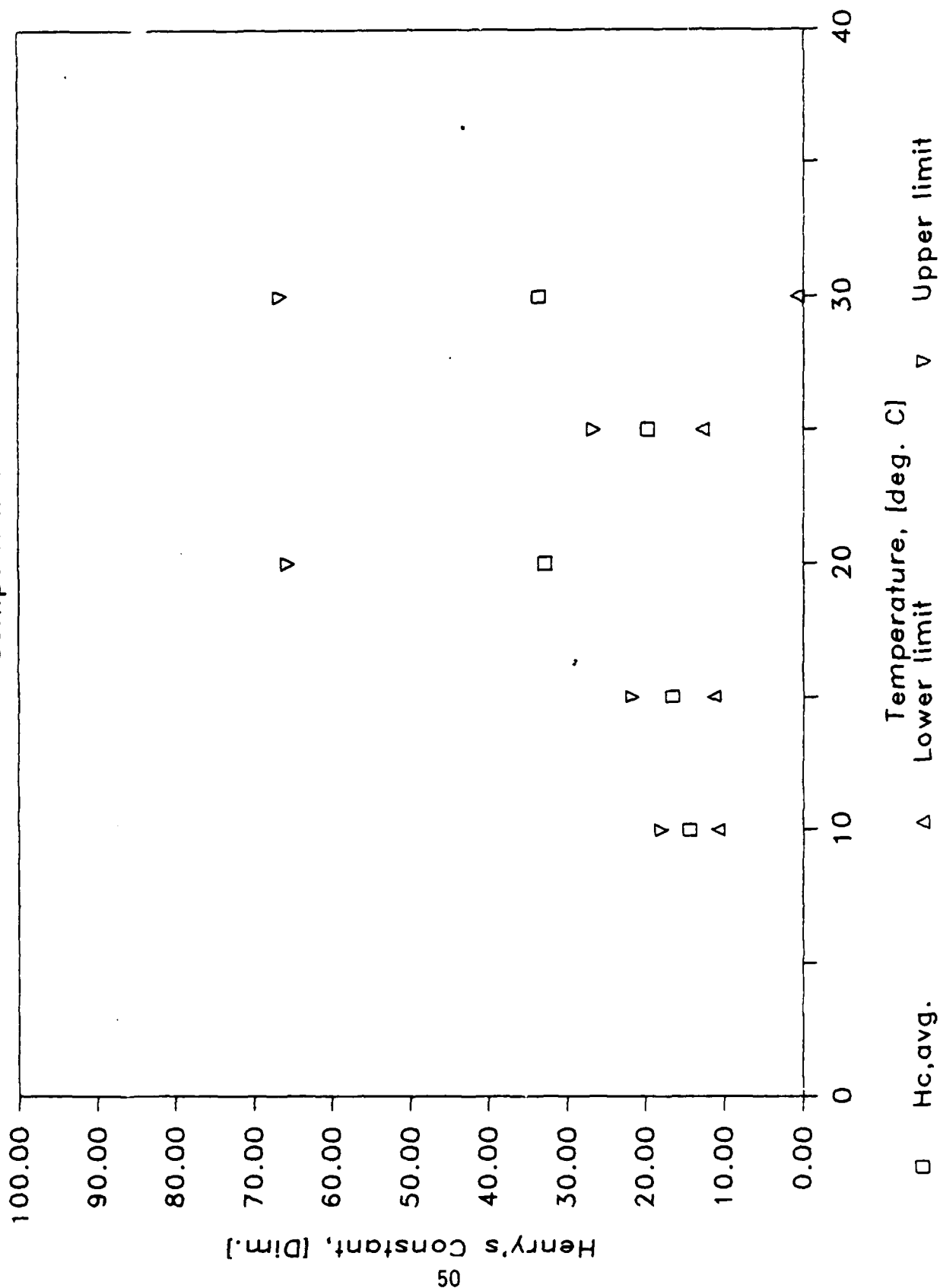
REGRESSION CONFIDENCE TEST

Component 1, 95% Confidence
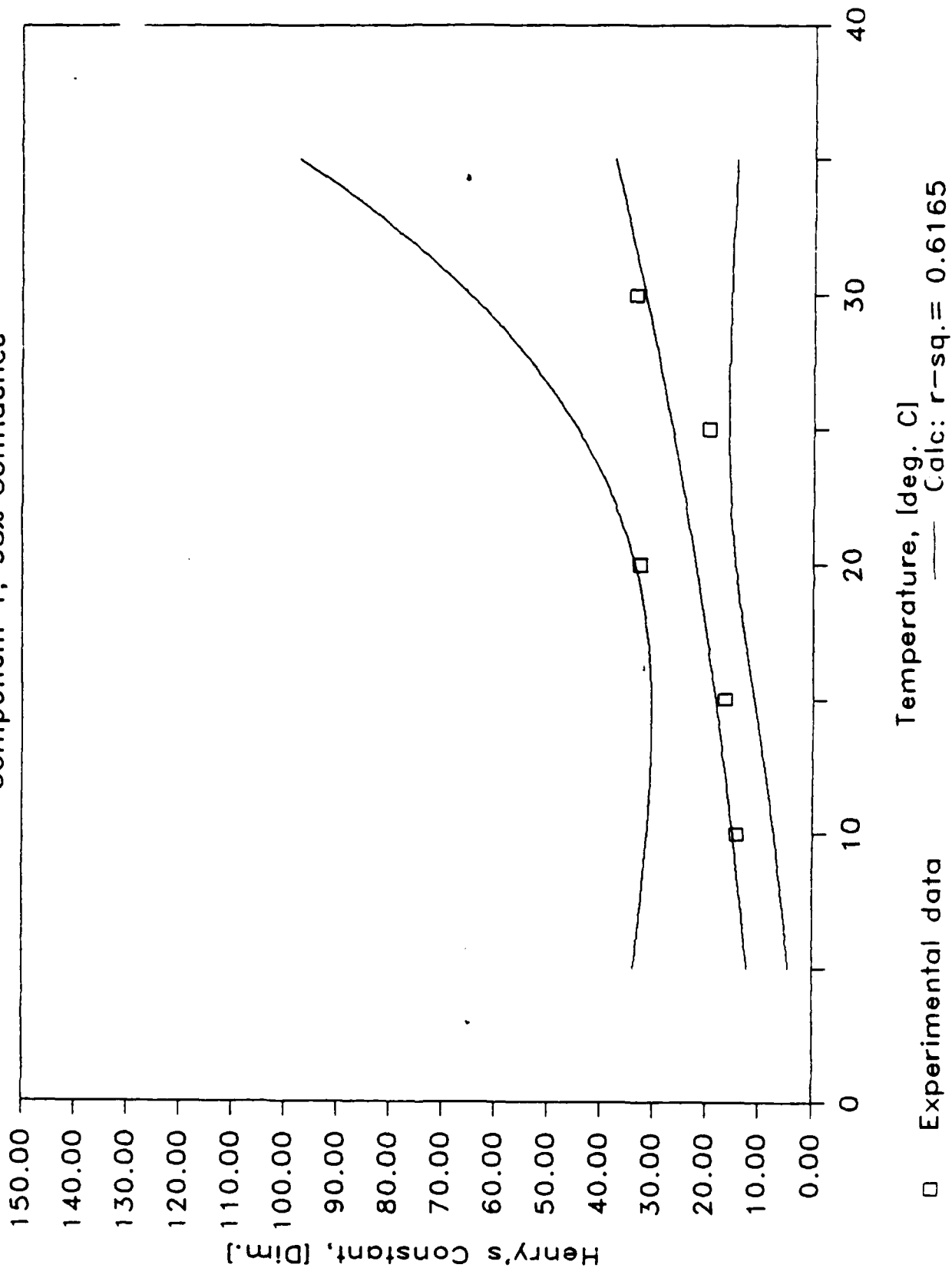
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.6165

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	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	10		24		34	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	13		13		13	
Component ID	101		101		101	
Temperature (C)	11.3		15.15		20	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	17.1448	1.0E-25	20.9724	1.0E-25	13.7837	1.0E-25
H,avg:atm-mol/mol	22213.2		27540.1		18404.8	
H,avg: atm-m3/mol	4.00E-01	1	4.96E-01	1	3.32E-01	1
H,avg: kPa-m3/mol	40.5496		50.2737		33.5974	
COV, r [std/mean]	3.99		14.85		18.03	
COV, both replic.	-------		-------		-------	
Observation: (1)	16.6653		23.2082		11.0441	
[atm-m3/m3] (2)	17.8432		24.0825		13.5873	
(3)	16.4595		18.0233		13.4236	
(4)	17.6113		18.5757		17.0799	
Injection: (1)	159440		190570		164890	
[Peak Area] (2)	158980		181270		174500	
(3)	37812		42239		43692	
(4)	37234		41965		41151	

		Temperature 4			Temperature 5		
RUN Number —)	I	25		I	11		I
REPLICATE —)	I	No. 1	No. 2	I	No. 1	No. 2	I
	I			I			I
Group No.	I	13		I	13		I
Component ID	I	101		I	101		I
Temperature (C)	I	25		I	30		I
Low Vol (ml)	I	30		I	30		I
High Vol (ml)	I	210		I	210		I
System Vol (ml)	I	250		I	250		I
	I			I			I
H, avg: atm-m3/m3	I	16.9283	1.0E-25	I	18.6762	1.0E-25	I
H, avg:atm-mol/mol	I	22989.0		I	25788.1		I
H, avg: atm-m3/mol	I	4.14E-01	1	I	4.65E-01	1	I
H, avg: kPa-m3/mol	I	41.9658		I	47.0755		I
COV, r [std/mean]	I	26.69		I	29.63		I
COV, both replic.	I	——		I	——		I
Observation: (1)	I	12.3382		I	18.2460		I
[atm-m3/m3] (2)	I	18.0733		I	26.2694		I
(3)	I	14.5921		I	13.0505		I
(4)	I	22.7094		I	17.1389		I
	I			I			I
Injection: (1)	I	178030		I	168660		I
[Peak Area] (2)	I	186320		I	155340		I
(3)	I	45638		I	39196		I
(4)	I	41459		I	36604		I
	I			I			I

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-2.0E+02
Y-INTERCEPT	=	-1.8E-01
R-SQUARED	=	0.0128

TEMPERATURE REGRESSION PLOT

Component 1C1

Ln(Henry's Constant), [atm−m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r−sq.= 0.0128

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95% CONFIDENCE TEST

Component 101

Henry's Constant, [Dim.]

40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00

0　　10　　20　　30　　40

Temperature, [deg. C]

□ Hc,avg.　　△ Lower limit　　▽ Upper limit
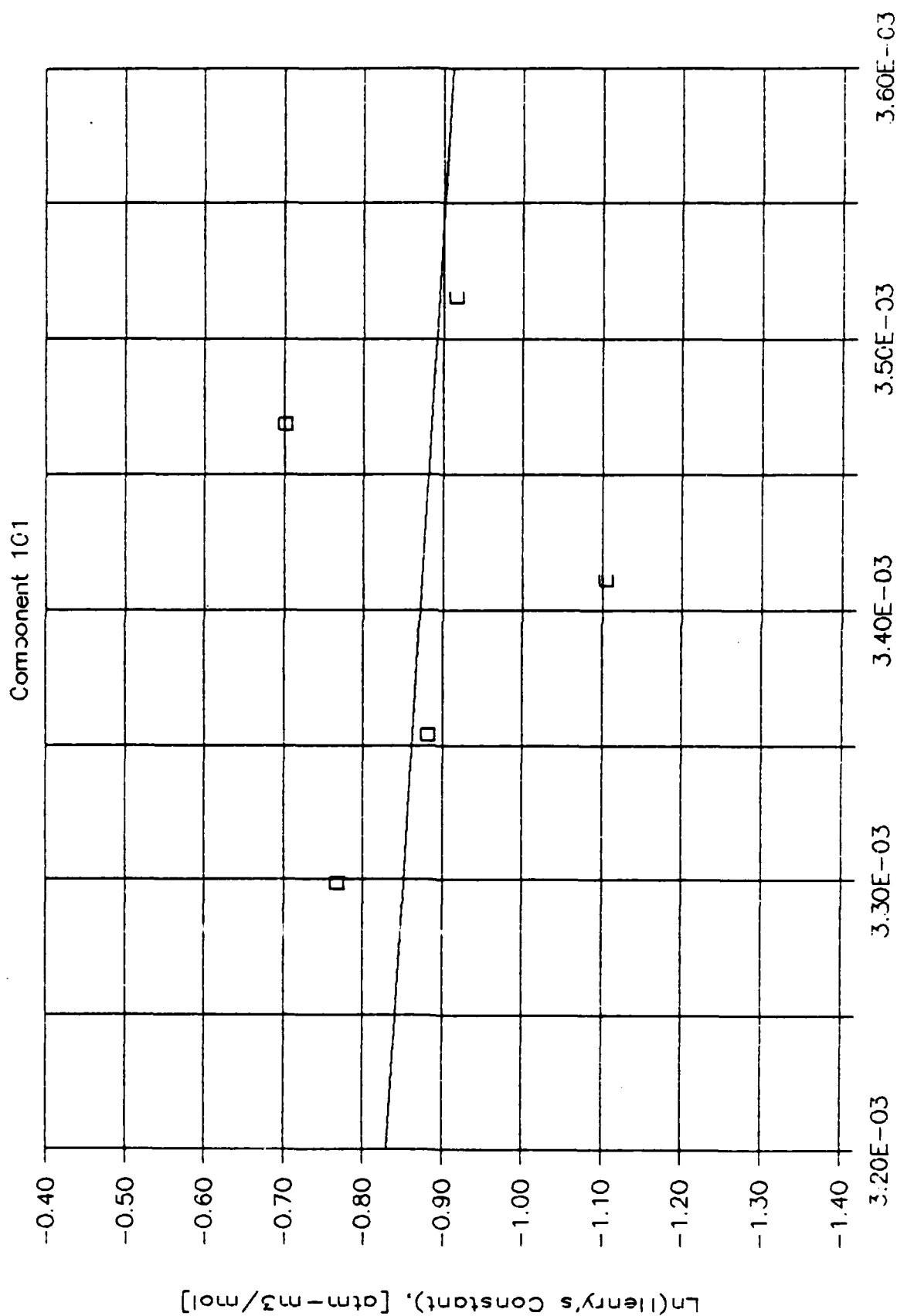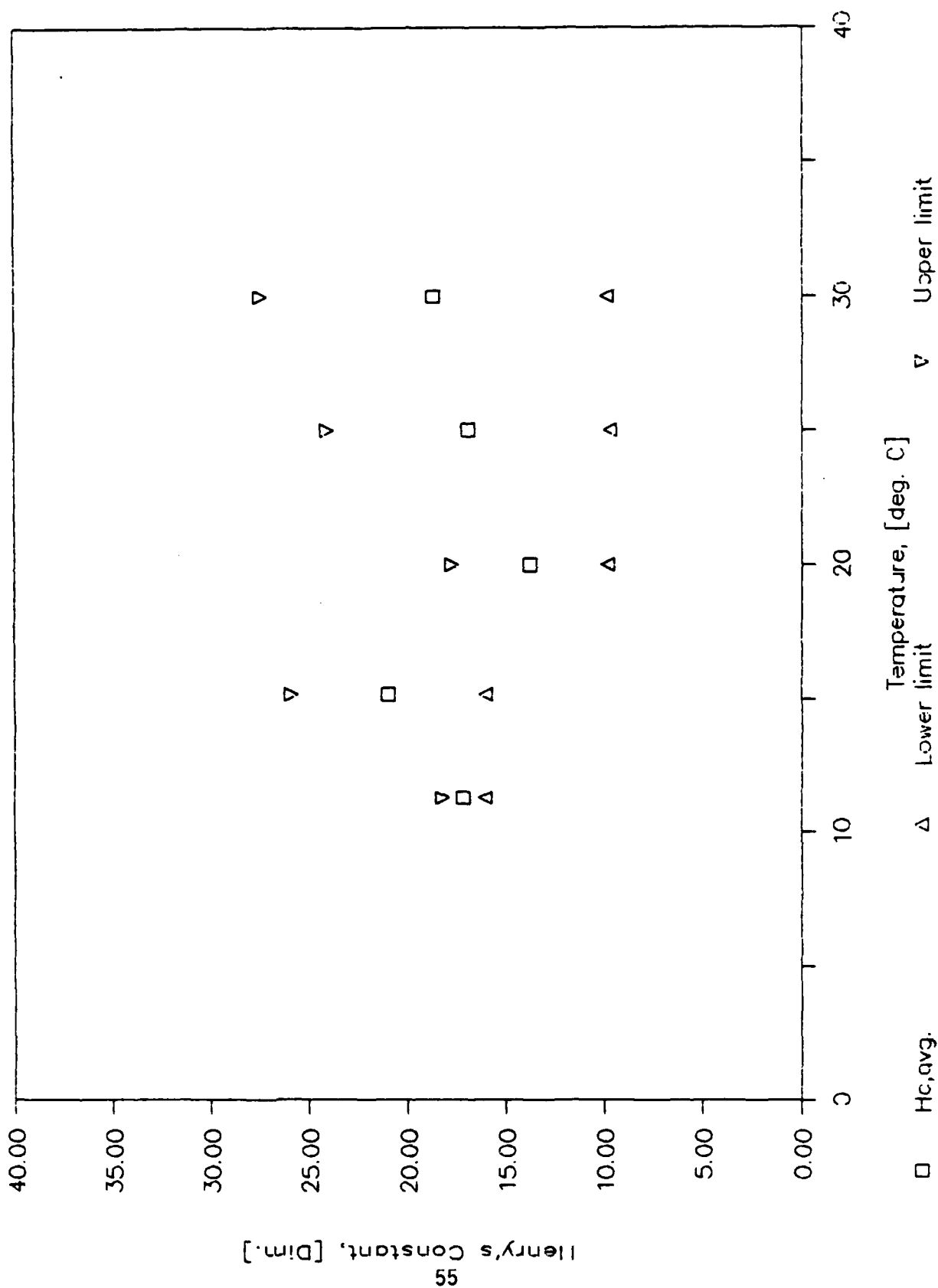
REGRESSION CONFIDENCE TEST

Component 101, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq. = 0.0128

□ Experimental data

		Temperature 1			Temperature 2			Temperature 3	
RUN Number —-)		6			6			7	
REPLICATE —-)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2
Group No.		1			1			1	
Component ID		2			2			2	
Temperature (C)		10			15			20	
Low Vol (ml)		30			30			30	
High Vol (ml)		210			210			210	
System Vol (ml)		250			250			250	
H,avg: atm-m3/m3		10.2642	1.0E-25		17.4885	1.0E-25		36.6895	1.0E-25
H,avg:atm-mol/mol		13237.8			22953.3			48989.7	
H,avg: atm-m3/mol		2.38E-01	1		4.14E-01	1		8.83E-01	1
H,avg: kPa-m3/mol		24.1652			41.9906			89.4293	
COV, r [std/mean]		40.01			15.87			19.19	
COV, both replic.		——			——			——	
Observation: (1)		6.7705			20.3232			41.3335	
[atm-m3/m3] (2)		6.6504			19.3988			44.0424	
(3)		14.0131			15.4020			29.9597	
(4)		13.6229			14.8301			31.4223	
Injection: (1)		4239000			8138200			8947400	
[Peak Area] (2)		5420000			7653500			8591000	
(3)		1341600			1849500			1827400	
(4)		1351700			1867000			1815100	

	Temperature 4		Temperature 5	
RUN Number —)	7		7	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2
Group No.	1		1	
Component ID	2		2	
Temperature (C)	25		30	
Low Vol (ml)	30		30	
High Vol (ml)	210		210	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	31.3782	1.0E-25	62.7900	1.0E-25
H, avg:atm-mol/mol	42601.5		86700.4	
H, avg: atm-m3/mol	7.68E-01	1	1.56E+00	1
H, avg: kPa-m3/mol	77.7678		158.2690	
COV, r [std/mean]	16.61		31.65	
COV, both replic.	———		———	
Observation: (1)	25.7687		81.1600	
[atm-m3/m3] (2)	29.1638		78.7974	
(3)	32.5781		46.0037	
(4)	37.9781		45.1988	
Injection: (1)	6283300		4352700	
[Peak Area] (2)	6506900		4164900	
(3)	1368000		841180	
(4)	1341800		842670	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -7.5E+03

Y-INTERCEPT   =   2.5E+01

R-SQUARED   =   0.9173

TEMPERATURE REGRESSION PLOT

Component 2

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9173

95% CONFIDENCE TEST
Component 2

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

60
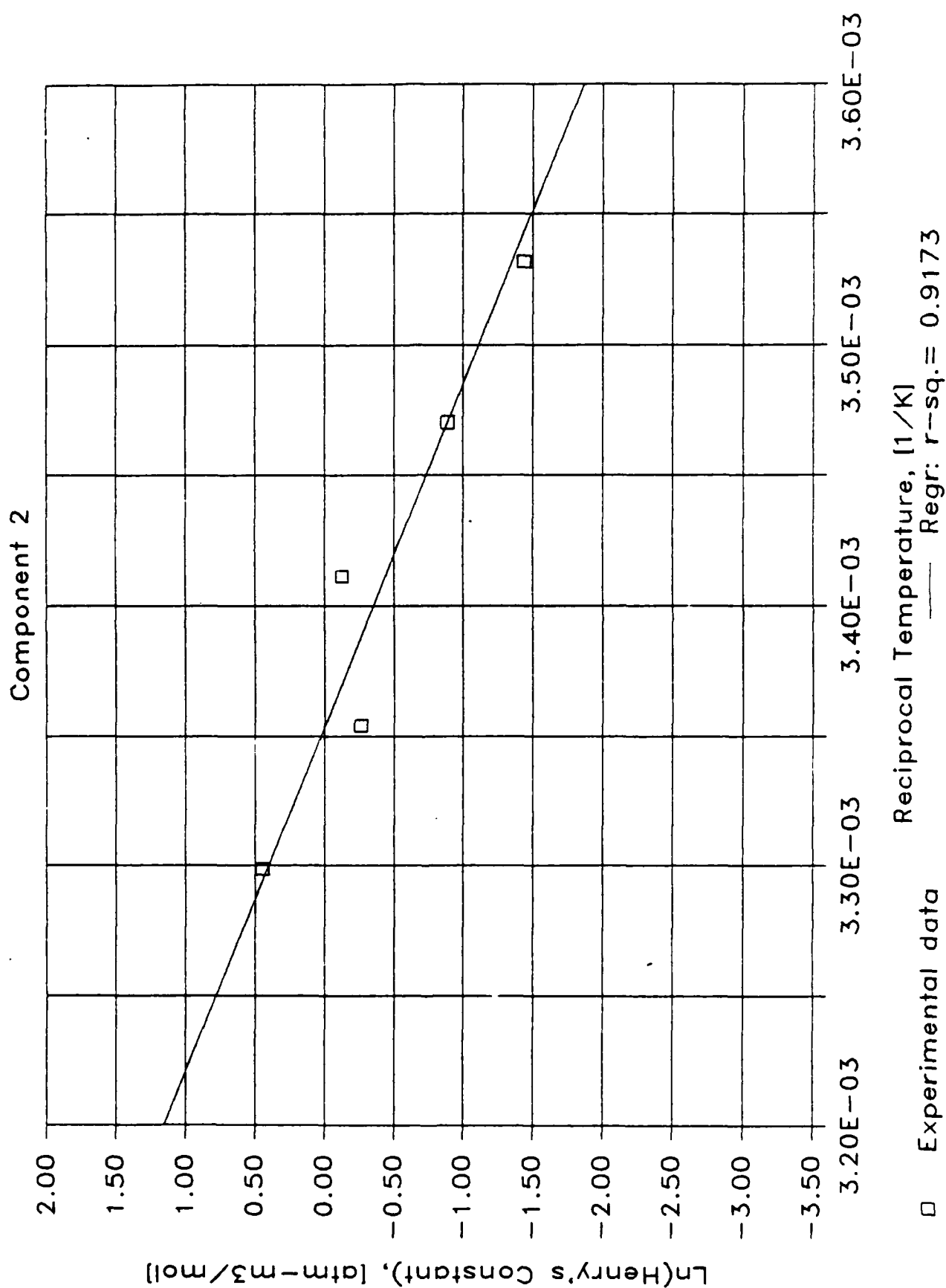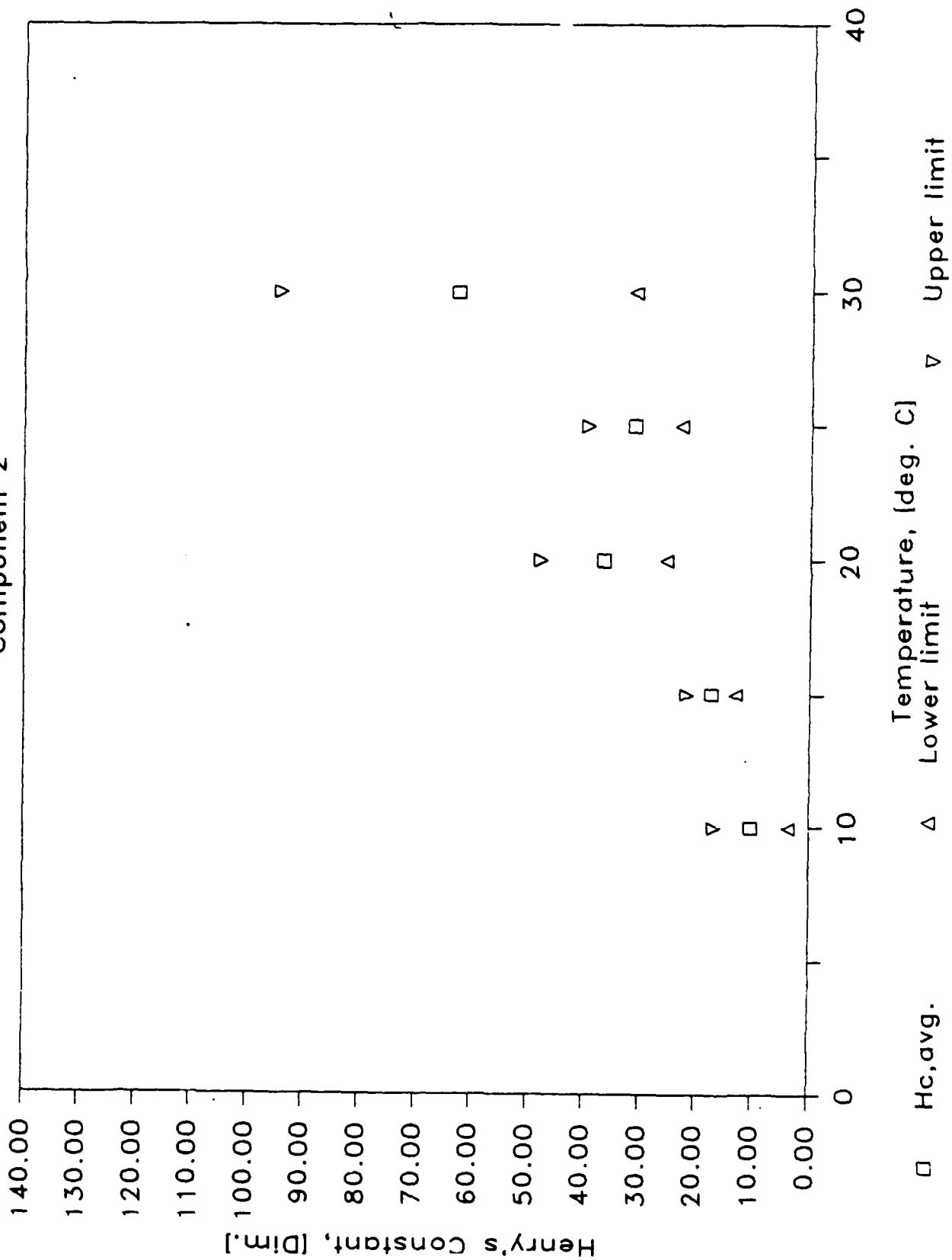
REGRESSION CONFIDENCE TEST

Component 2, 95% Confidence
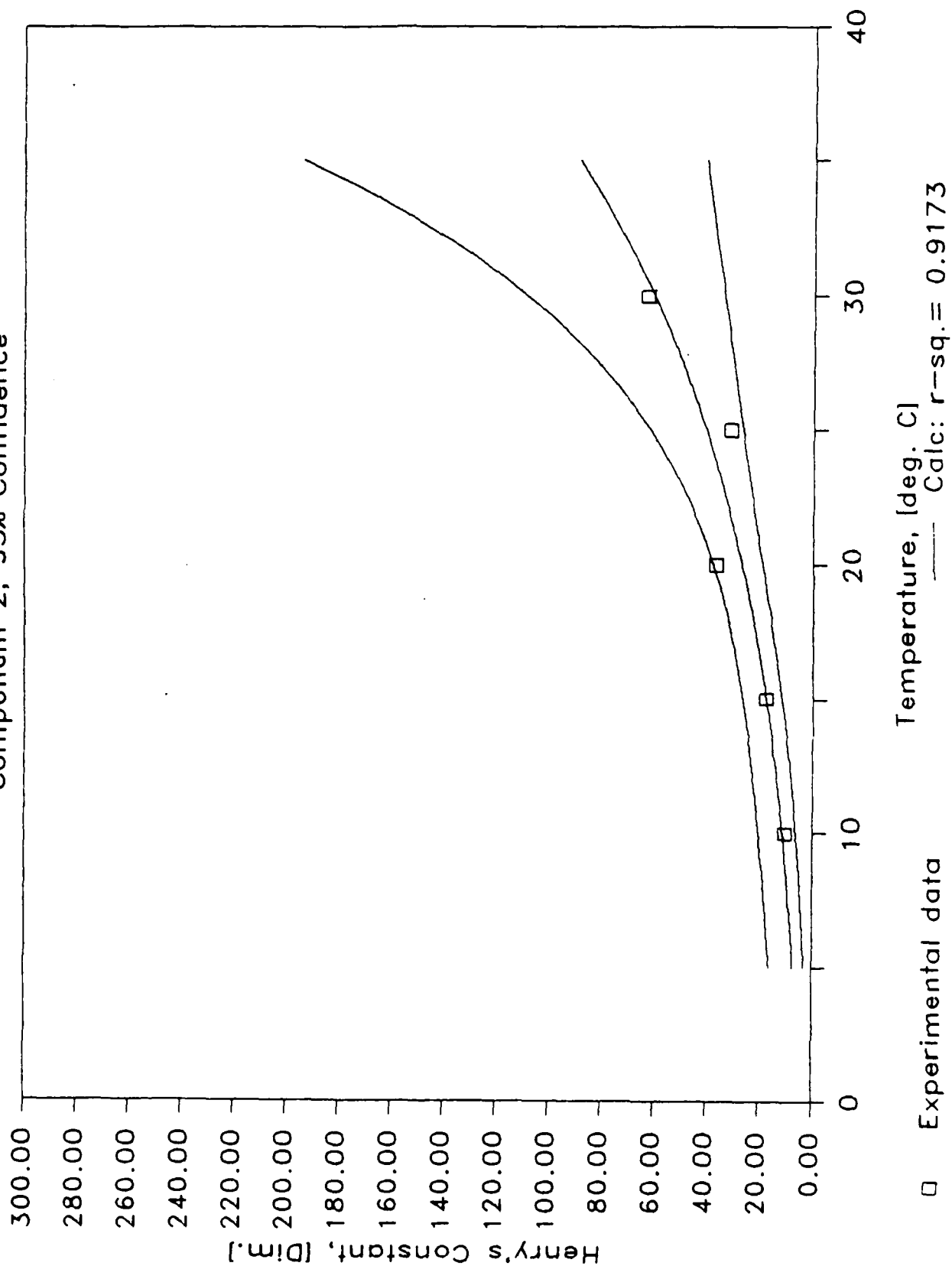
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

——— Calc: r-sq.= 0.9173

		Temperature 1		Temperature 2		Temperature 3		
RUN Number ——)		6		20		31		
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	
Group No.		13		13		13		
Component ID		102		102		102		
Temperature (C)		11.3		15.15		20		
Low Vol (ml)		30		30		30		
High Vol (ml)		210		210		210		
System Vol (ml)		250		250		250		
H, avg: atm-m3/m3		28.5907	1.0E-25	19.4816	1.0E-25	-23.7783	1.0E-25	
H, avg:atm-mol/mol		37042.8		25582.4		-31750.0		
H, avg: atm-m3/mol		6.67E-01	1	4.61E-01	1	########	1	
H, avg: kPa-m3/mol		67.6206		46.6999		-57.9587		
COV, r [std/mean]		5.15		18.94		-191.62		
COV, both replic.		——		——		——		
Observation: (1)		28.7444		16.2663		-66.3679		
[atm-m3/m3] (2)		26.8502		16.3059		-59.9751		
(3)		30.4330		22.6413		15.3265		
(4)		28.3353		22.7126		15.9034		
Injection: (1)		1456000		124620		89349		
[Peak Area] (2)		1468200		133500		61960		
(3)		311600		29722		14991		
(4)		314890		29705		14857		

		Temperature 4		Temperature 5	
RUN Number ---)		21		7	
REPLICATE ---)		No. 1 No. 2		No. 1 No. 2	
Group No.		13		13	
Component ID		102		102	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		44.4458 1.0E-25		424.0461 1.0E-25	
H, avg:atm-mol/mol		60358.5		585522.8	
H, avg: atm-m3/mol		1.09E+00 1		1.05E+01 1	
H, avg: kPa-m3/mol		110.1827		#########	
COV, r [std/mean]		56.91		189.03	
COV, both replic.		------		------	
Observation: (1)		36.7509		-28.8881	
[atm-m3/m3] (2)		81.1478		#########	
(3)		23.1345		-34.1606	
(4)		36.7500		138.8790	
Injection: (1)		150070		1704900	
[Peak Area] (2)		140090		1649600	
(3)		31068		254850	
(4)		29002		310960	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	ERR
Y-INTERCEPT	=	ERR
R-SQUARED	=	ERR

95% CONFIDENCE TEST

Component 102
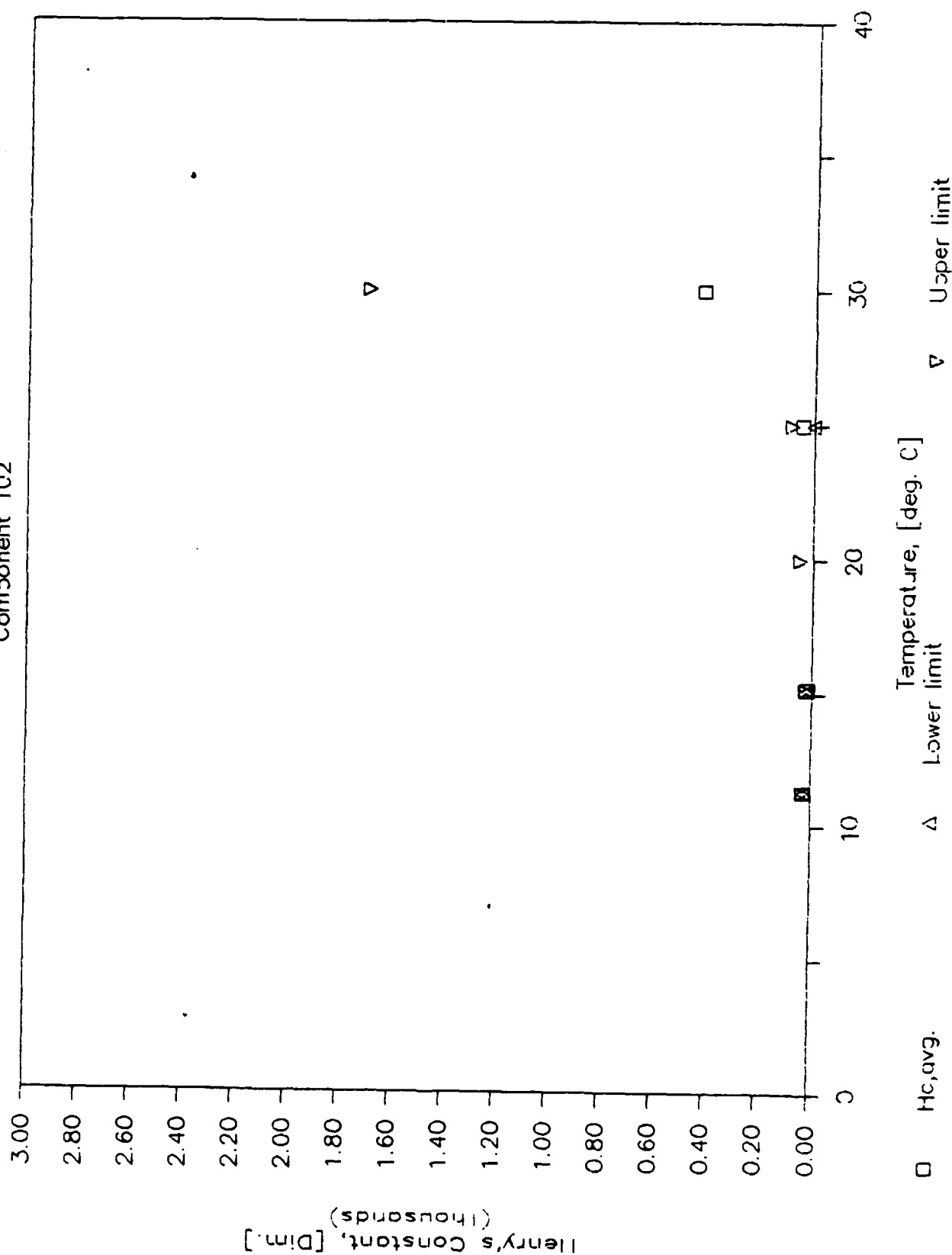
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	Temperature 1		Temperature 2		Temperature 3	
RUN Number —>	10		10		11	
REPLICATE —>	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	1		1		1	
Component ID	3		3		3	
Temperature (C)	10		15		20	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	30.0178	1.0E-25	29.3345	1.0E-25	26.2950	1.0E-25
H, avg: atm-mol/mol	38714.0		38500.9		35110.4	
H, avg: atm-m3/mol	6.97E-01	1	6.94E-01	1	6.33E-01	1
H, avg: kPa-m3/mol	70.6713		70.2823		64.0931	
COV, r [std/mean]	23.49		15.31		18.00	
COV, both replic.	———		———		———	
Observation: (1)	30.6247		27.2043		28.4668	
[atm-m3/m3] (2)	39.3879		24.5190		31.8405	
(3)	22.6544		34.8868		21.4523	
(4)	27.4040		30.7288		23.4212	
Injection: (1)	3302300		6615100		6471500	
[Peak Area] (2)	3145500		6851900		6167600	
(3)	708230		1427700		1387000	
(4)	678100		1452200		1364800	

		Temperature 4			Temperature 5	
RUN Number ——)		11			11	
REPLICATE ——)		No. 1	No. 2		No. 1	No. 2
Group No.		1			1	
Component ID		3			3	
Temperature (C)		25			30	
Low Vol (ml)		30			30	
High Vol (ml)		210			210	
System Vol (ml)		250			250	
H, avg: atm-m3/m3		33.7096	1.0E-25		34.1064	1.0E-25
H, avg:atm-mol/mol		45778.5			47094.0	
H, avg: atm-m3/mol		8.25E-01	1		8.48E-01	1
H, avg: kPa-m3/mol		83.5673			85.9688	
COV, r [std/mean]		16.31			79.75	
COV, both replic.		——			——	
Observation: (1)		27.6591			11.8221	
[atm-m3/m3] (2)		33.8584			12.1452	
(3)		32.3777			46.8858	
(4)		40.9432			66.3724	
Injection: (1)		3311500			738890	
[Peak Area] (2)		3387900			971820	
(3)		712860			195910	
(4)		692660			190280	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-9.6E+02
Y-INTERCEPT	=	3.0E+00
R-SQUARED	=	0.4974

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TEMPERATURE REGRESSION PLOT

Component 3

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data
—— Regr: r-sq.= 0.4974

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95% CONFIDENCE TEST

Component 3

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▷ Upper limit

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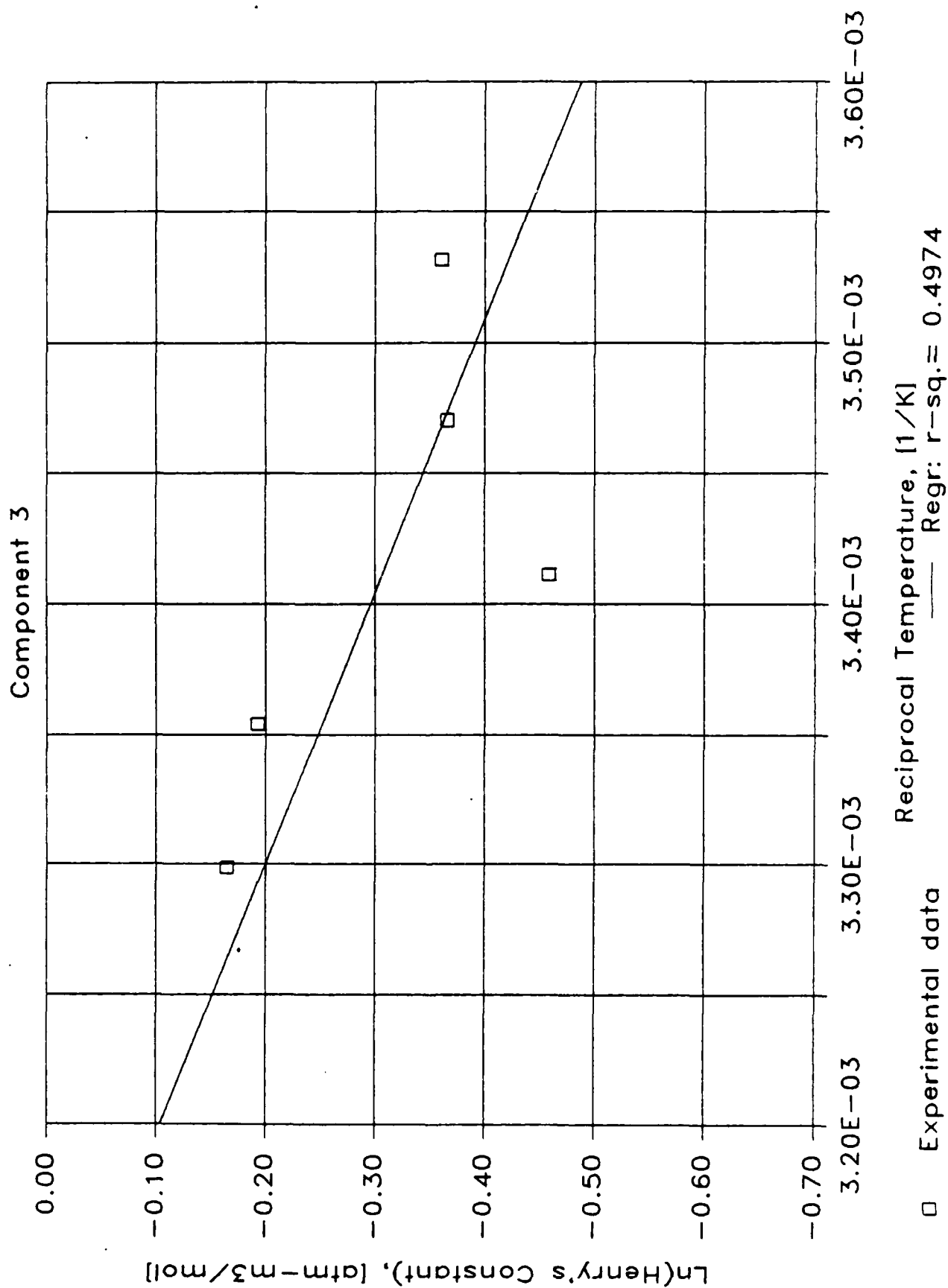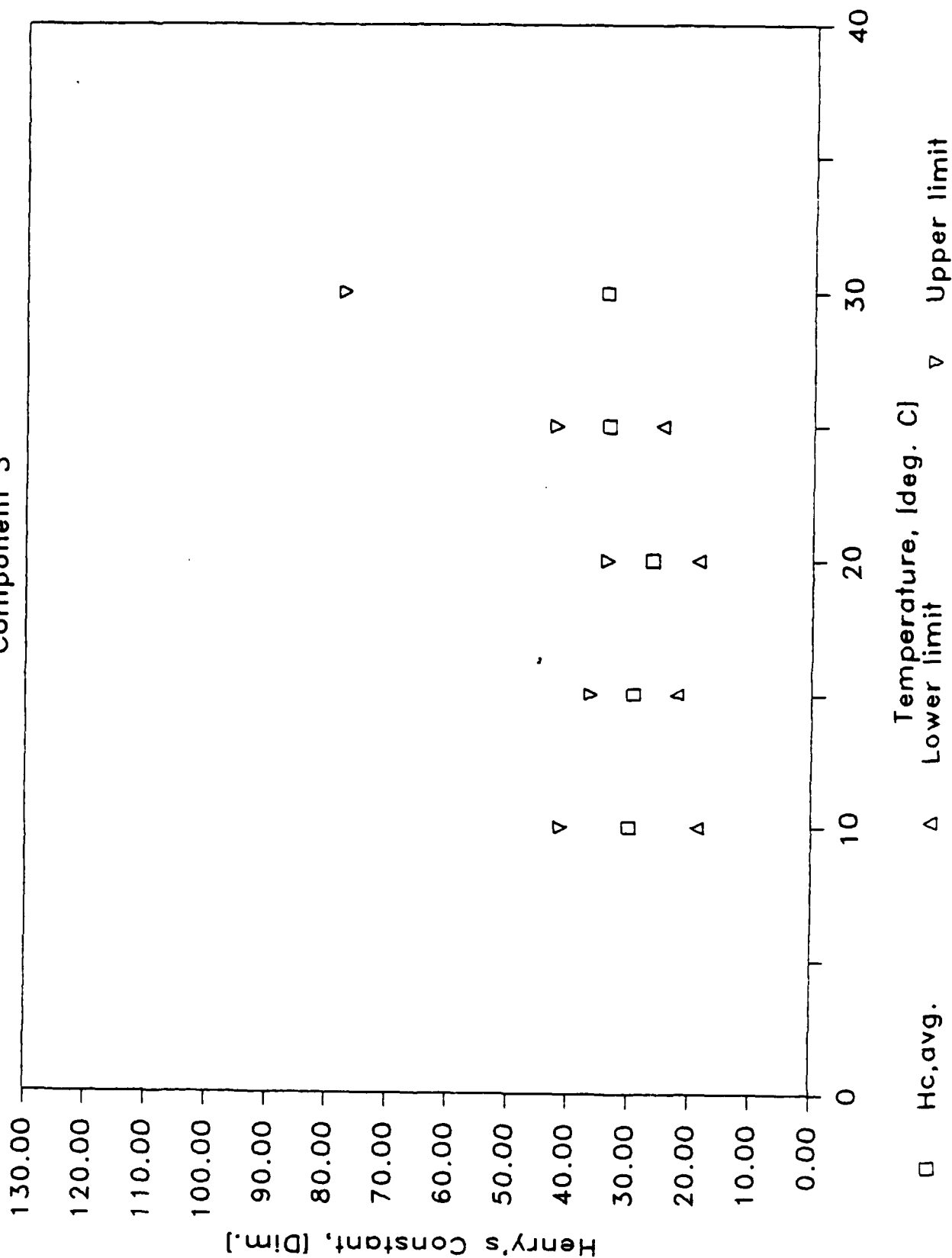
REGRESSION CONFIDENCE TEST

Component 3, 95% Confidence
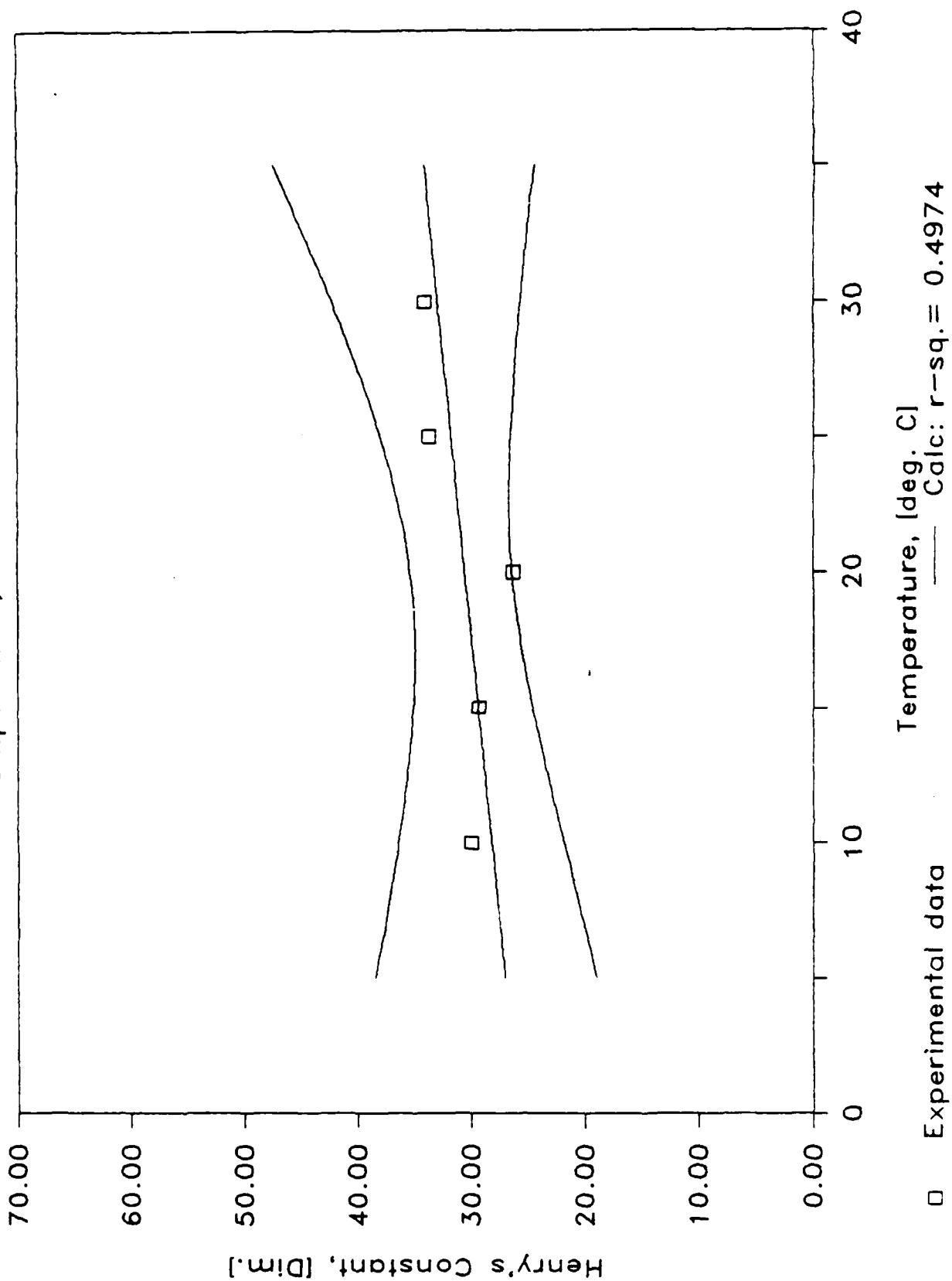
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.4974

□   Experimental data

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	2		16		28	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	13		13		13	
Component ID	103		103		103	
Temperature (C)	11.3		15.2		20	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	35.1714	1.0E-25	8.6027	1.0E-25	8.4262	1.0E-25
H, avg: atm-mol/mol	45569.0		11298.6		11251.1	
H, avg: atm-m3/mol	8.21E-01	1	2.04E-01	1	2.03E-01	1
H, avg: kPa-m3/mol	83.1849		20.6253		20.5385	
COV, r [std/mean]	18.99		19.10		69.26	
COV, both replic.	——		——		——	
Observation: (1)	30.1287		6.9932		3.3611	
[atm-m3/m3] (2)	28.8115		9.6229		13.3835	
(3)	42.0842		7.4320		3.3839	
(4)	39.6614		10.3624		13.5762	
Injection: (1)	431390		13660		7231	
[Peak Area] (2)	449800		13999		7259	
(3)	91687		4265		3237	
(4)	92290		3785		1812	

		Temperature 4		Temperature 5	
RUN Number ---)		17		3	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		13		13	
Component ID		103		103	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		28.5047	1.0E-25	126.9938	1.0E-25
H,avg:atm-mol/mol		38710.1		175353.1	
H,avg: atm-m3/mol		6.97E-01	1	3.16E+00	1
H,avg: kPa-m3/mol		70.6641		320.1020	
COV, r [std/mean]		88.64		66.41	
COV, both replic.		------		------	
Observation:	(1)	8.0451		57.0423	
[atm-m3/m3]	(2)	58.8220		69.2788	
	(3)	7.3113		140.9994	
	(4)	39.8402		240.6549	
Injection:	(1)	15173		479350	
[Peak Area]	(2)	14619		503960	
	(3)	4483		94949	
	(4)	2998		93575	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

\# OF POINTS   =   5

SLOPE   =   -7.5E+03

Y-INTERCEPT   =   2.5E+01

R-SQUARED   =   0.3205
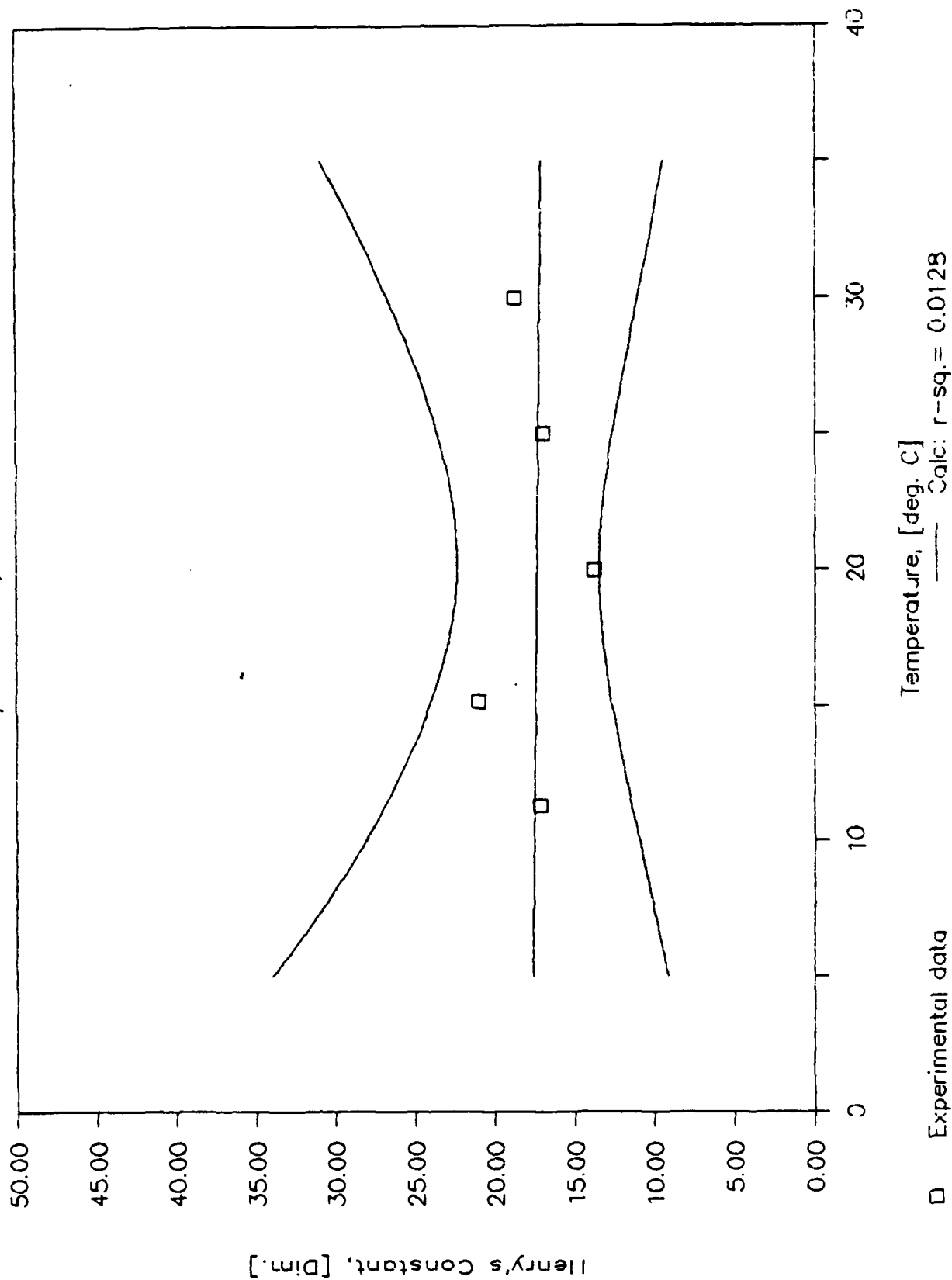
TEMPERATURE REGRESSION PLOT

Component 103

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.3205

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95% CONFIDENCE TEST

Component 1C3

Legend:
□ Hc,avg.   △ Lower limit   ▽ Upper limit

X-axis: Temperature, [deg. C]
Y-axis: Henry's Constant, [Dim.]
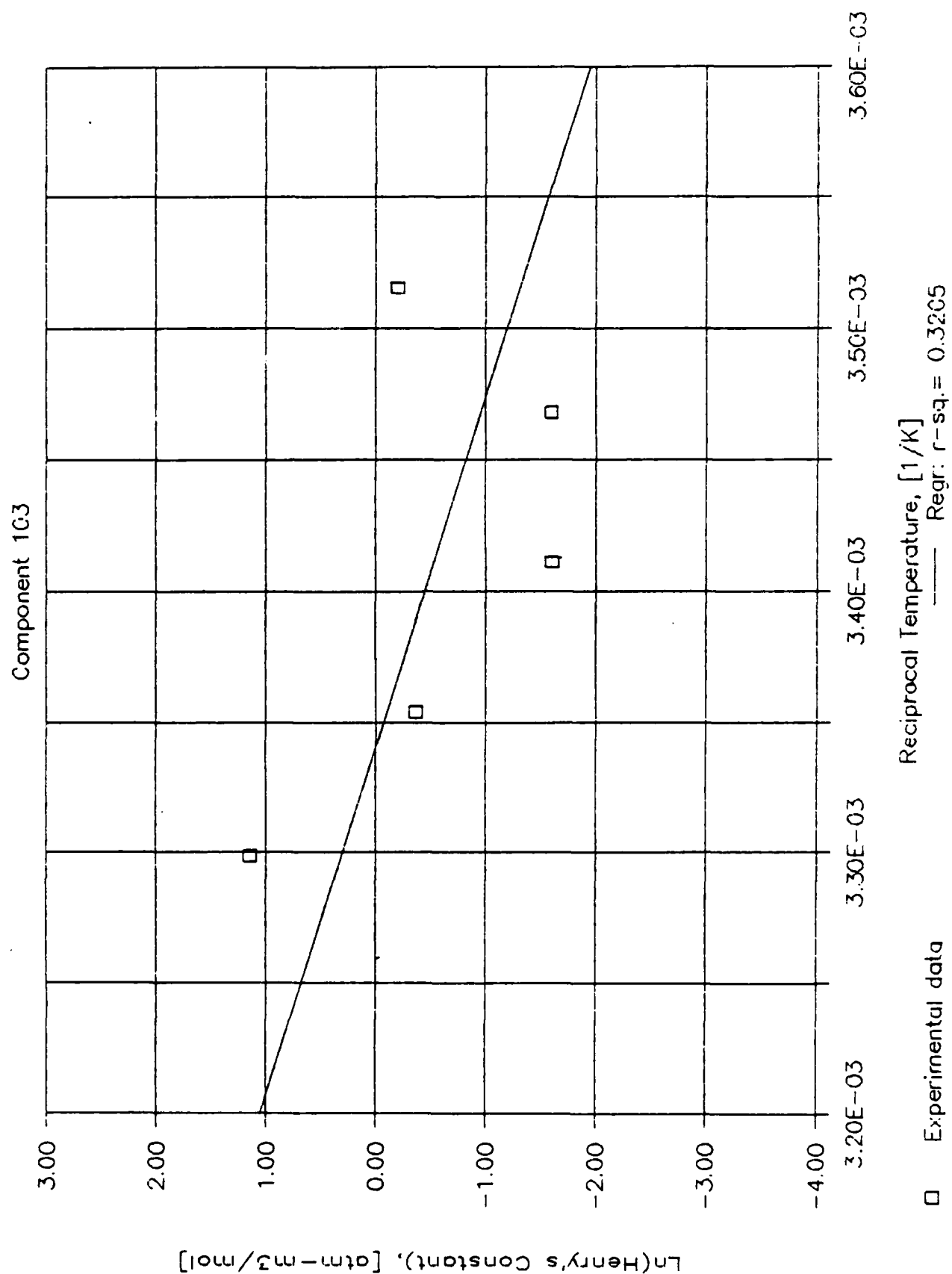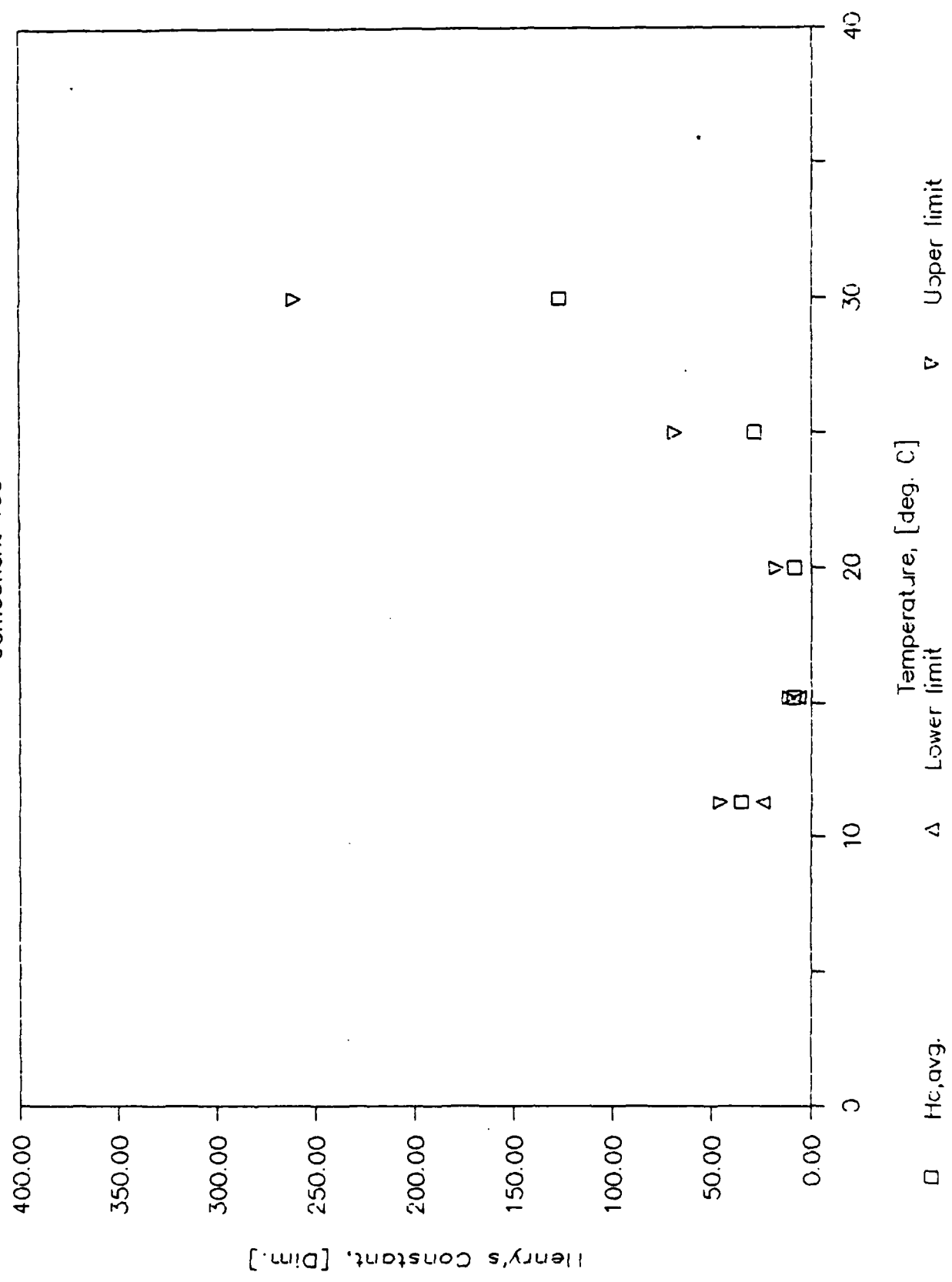
REGRESSION CONFIDENCE TEST

Component 103, 95% Confidence
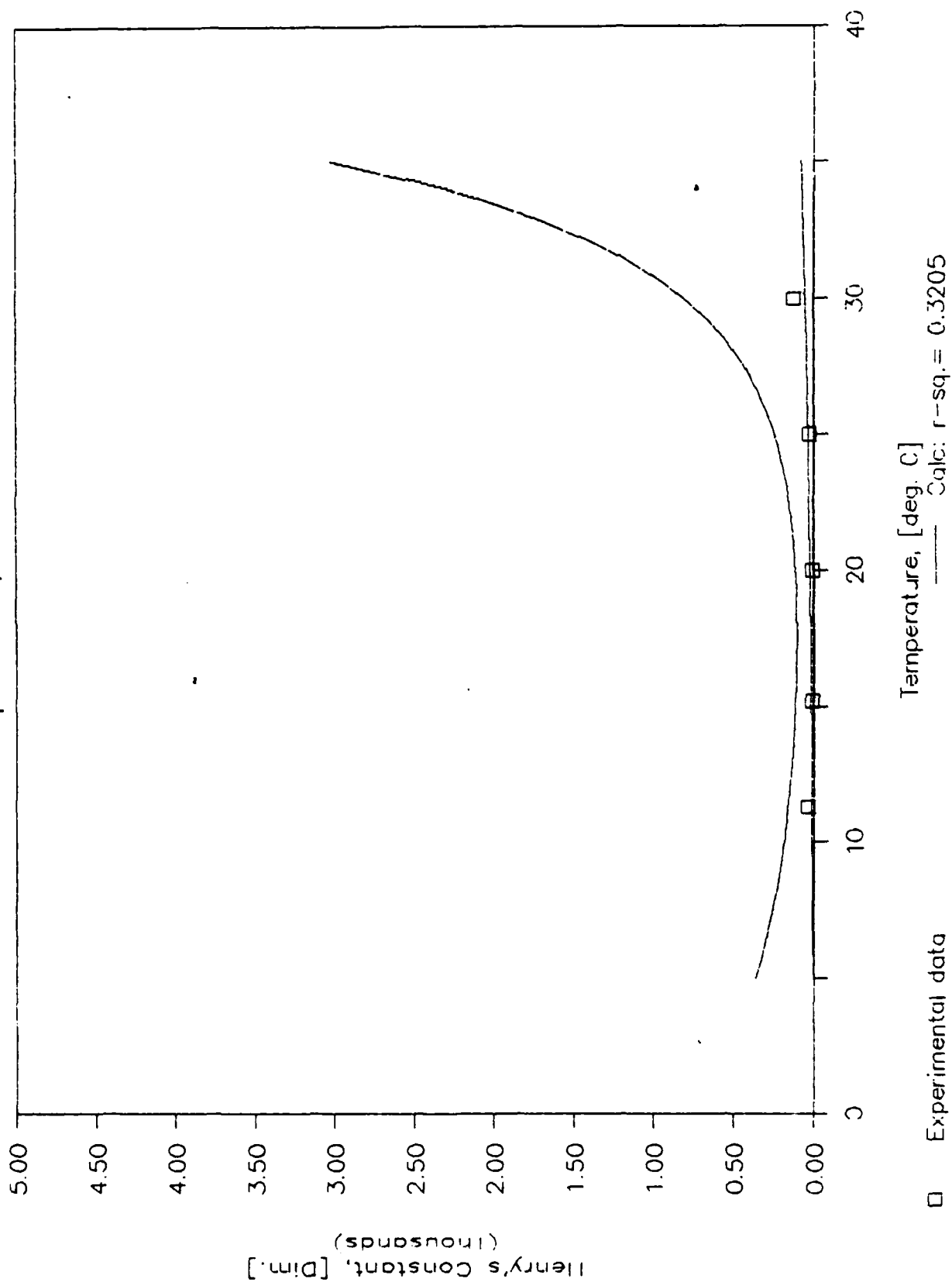
Henry's Constant, [Dim.]
(Thousands)

Temperature, [deg. C]

□ Experimental data
——— Calc: r-sq.= 0.3205

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		Temperature 1			Temperature 2			Temperature 3		
RUN Number —)		13			14			15		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		1			1			1		
Component ID		4			4			4		
Temperature (C)		10			15			20		
Low Vol (ml)		30			30			30		
High Vol (ml)		210			210			210		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		4.4272	1.0E-25		5.3138	1.0E-25		5.8016	1.0E-25	
H, avg: atm-mol/mol		5709.7			6974.2			7746.7		
H, avg: atm-m3/mol		1.03E-01	1		1.26E-01	1		1.40E-01	1	
H, avg: kPa-m3/mol		10.4229			12.7312			14.1413		
COV, r [std/mean]		1.76			7.03			11.47		
COV, both replic.		———			———			———		
Observation: (1)		4.4321			5.1285			5.2134		
[atm-m3/m3] (2)		4.5233			5.7465			5.2374		
(3)		4.3324			4.9016			6.3617		
(4)		4.4287			5.4785			6.3941		
Injection: (1)		1614400			1607500			1620700		
[Peak Area] (2)		1595600			1572600			1773900		
(3)		622080			576150			576340		
(4)		615650			546330			575080		

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		Temperature 4		Temperature 5	
RUN Number —)		15		15	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		1		1	
Component ID		4		4	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		7.2406	1.0E-25	8.9581	1.0E-25
H,avg:atm-mol/mol		9832.9		12369.3	
H,avg: atm-m3/mol		1.77E-01	1	2.23E-01	1
H,avg: kPa-m3/mol		17.9496		22.5798	
COV, r [std/mean]		4.39		2.61	
COV, both replic.		——		——	
Observation:	(1)	7.4082		8.8352	
[atm-m3/m3]	(2)	7.5942		9.2200	
	(3)	6.8968		8.7008	
	(4)	7.0630		9.0761	
Injection:	(1)	2064200		945450	
[Peak Area]	(2)	2005300		940260	
	(3)	629690		269880	
	(4)	623570		265850	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.2E+03
Y-INTERCEPT	=	9.1E+00
R-SQUARED	=	0.9815

TEMPERATURE REGRESSION PLOT

Component 4

Ln(Henry's Constant), [atm−m3/mol]

Reciprocal Temperature, [1/K]
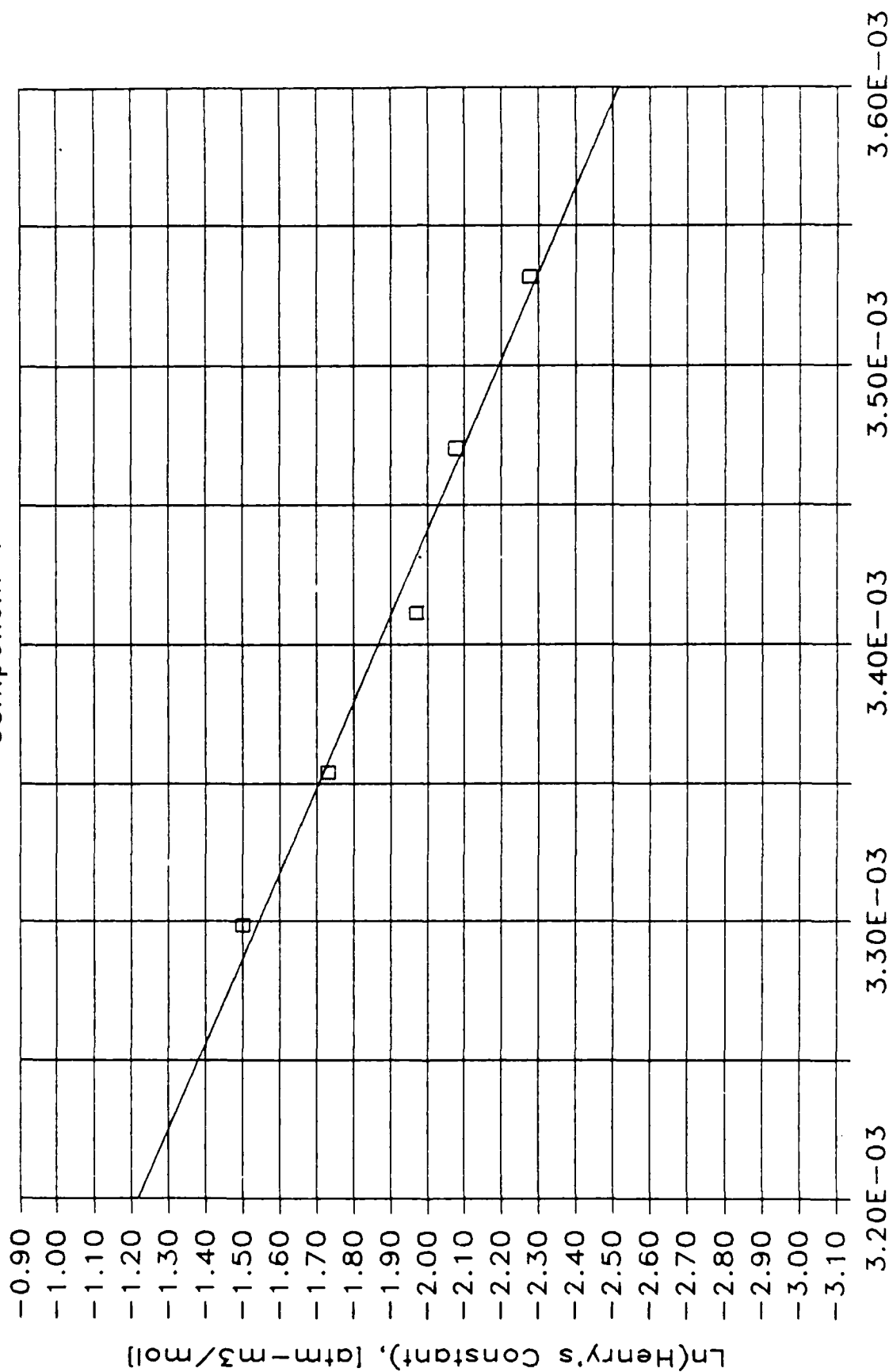
□ Experimental data
—— Regr: r−sq.= 0.9815

95% CONFIDENCE TEST

Component 4

REGRESSION CONFIDENCE TEST

Component 4, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r—sq.= 0.9815
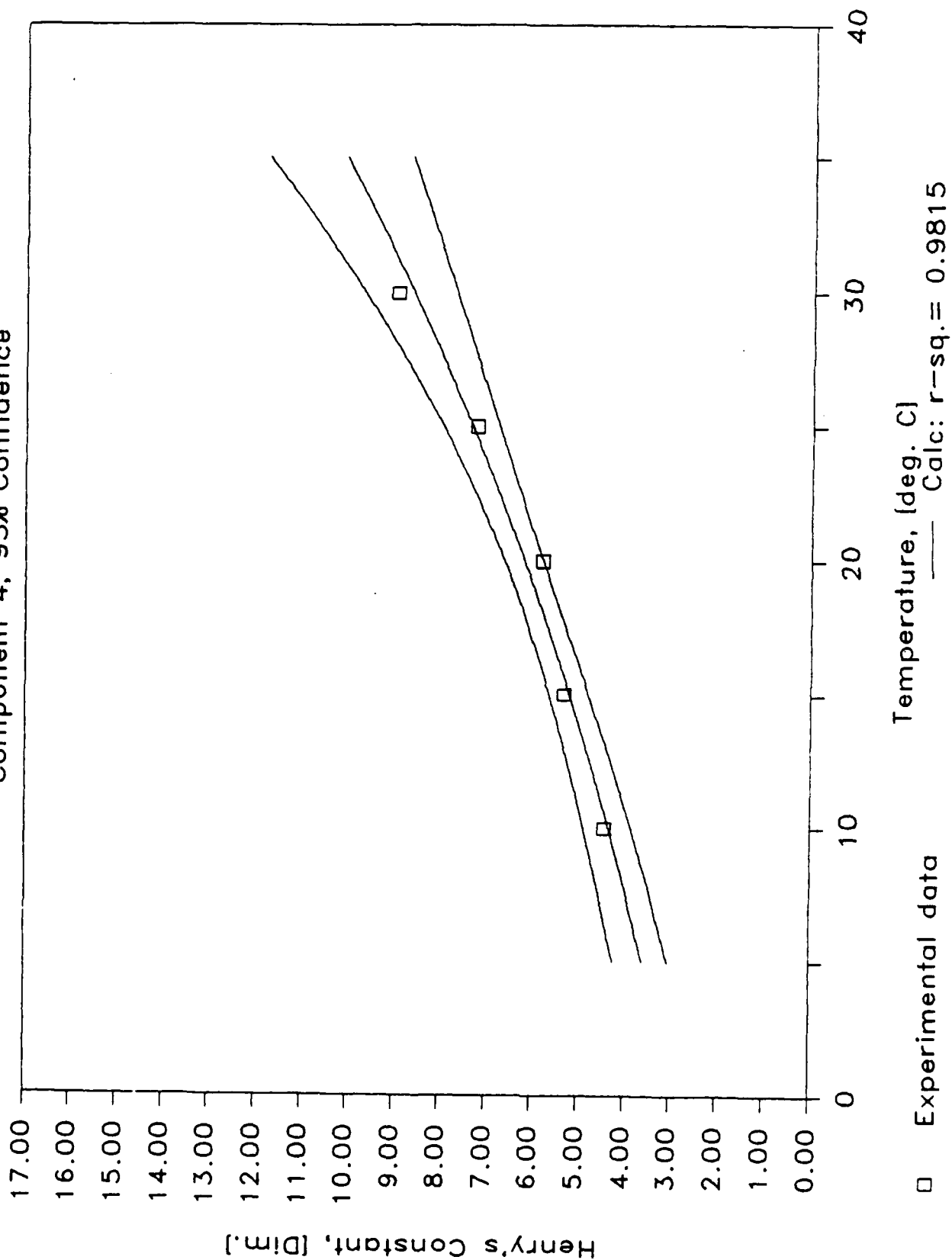
R e s u l t s   S u m m a r y   f o r   C o m p o n e n t   5

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)		2		3		4	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		2		2		2	
Component ID		5		5		5	
Temperature (C)		10		15		20.1	
Low Vol (ml)		25		25		25	
High Vol (ml)		205		205		205	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0700	1.0E-25	0.0606	1.0E-25	0.0698	1.0E-25
H, avg: atm-mol/mol		90.3		79.6		93.3	
H, avg: atm-m3/mol		1.63E-03	1	1.43E-03	1	1.68E-03	1
H, avg: kPa-m3/mol		0.1648		0.1453		0.1703	
COV, r [std/mean]		12.19		7.63		4.29	
COV, both replic.		———		———		———	
Observation: (1)		0.0748		0.0659		0.0730	
[atm-m3/m3] (2)		0.0793		0.0585		0.0716	
(3)		0.0608		0.0628		0.0680	
(4)		0.0651		0.0554		0.0667	
Injection: (1)		392800		444360		534990	
[Peak Area] (2)		364460		436690		520980	
(3)		1956900		2319900		2689300	
(4)		1911800		2418000		2709200	

		Temperature 4		Temperature 5	
RUN Number ——)		3		1	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2
Group No.		2		2	
Component ID		5		5	
Temperature (C)		25		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0641	1.0E-25	0.0953	1.0E-25
H, avg: atm-mol/mol		87.1		131.6	
H, avg: atm-m3/mol		1.57E-03	1	2.37E-03	1
H, avg: kPa-m3/mol		0.1590		0.2402	
COV, r [std/mean]		8.56		10.56	
COV, both replic.		———		———	
Observation: (1)		0.0634		0.1028	
[atm-m3/m3] (2)		0.0575		0.0856	
(3)		0.0709		0.1051	
(4)		0.0647		0.0877	
Injection: (1)		600160		825300	
[Peak Area] (2)		633110		833670	
(3)		3218600		3594500	
(4)		3327500		3894300	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -1.4E+03

Y-INTERCEPT   =   -1.5E+00

R-SQUARED   =   0.4641

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TEMPERATURE REGRESSION PLOT

Component 5

Ln(Henry's Constant), [atm−m3/mol]

Reciprocal Temperature, [1/K]
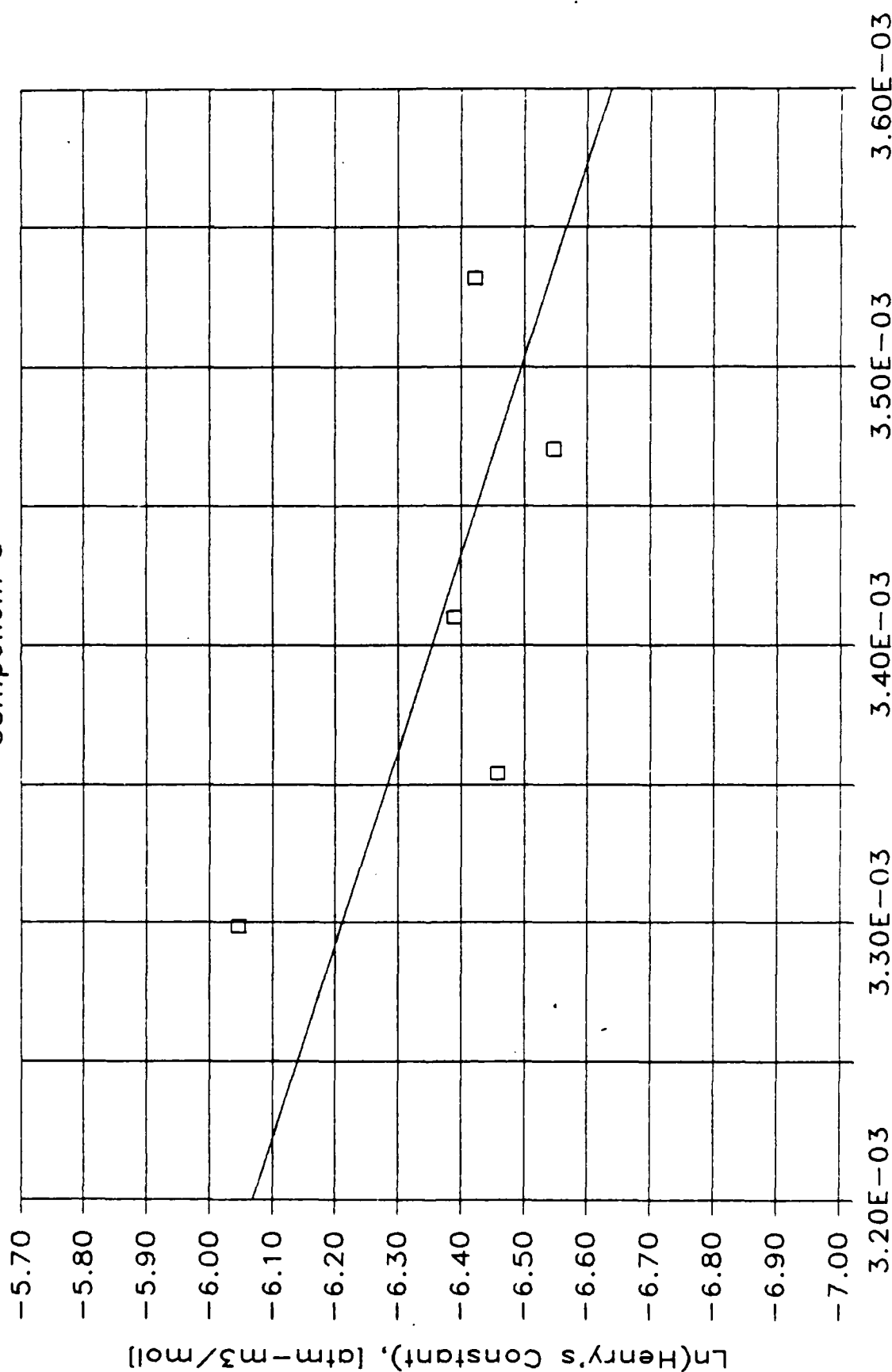
□ Experimental data

—— Regr: r−sq.= 0.4641

95% CONFIDENCE TEST

Component 5

REGRESSION CONFIDENCE TEST

Component 5, 95% Confidence
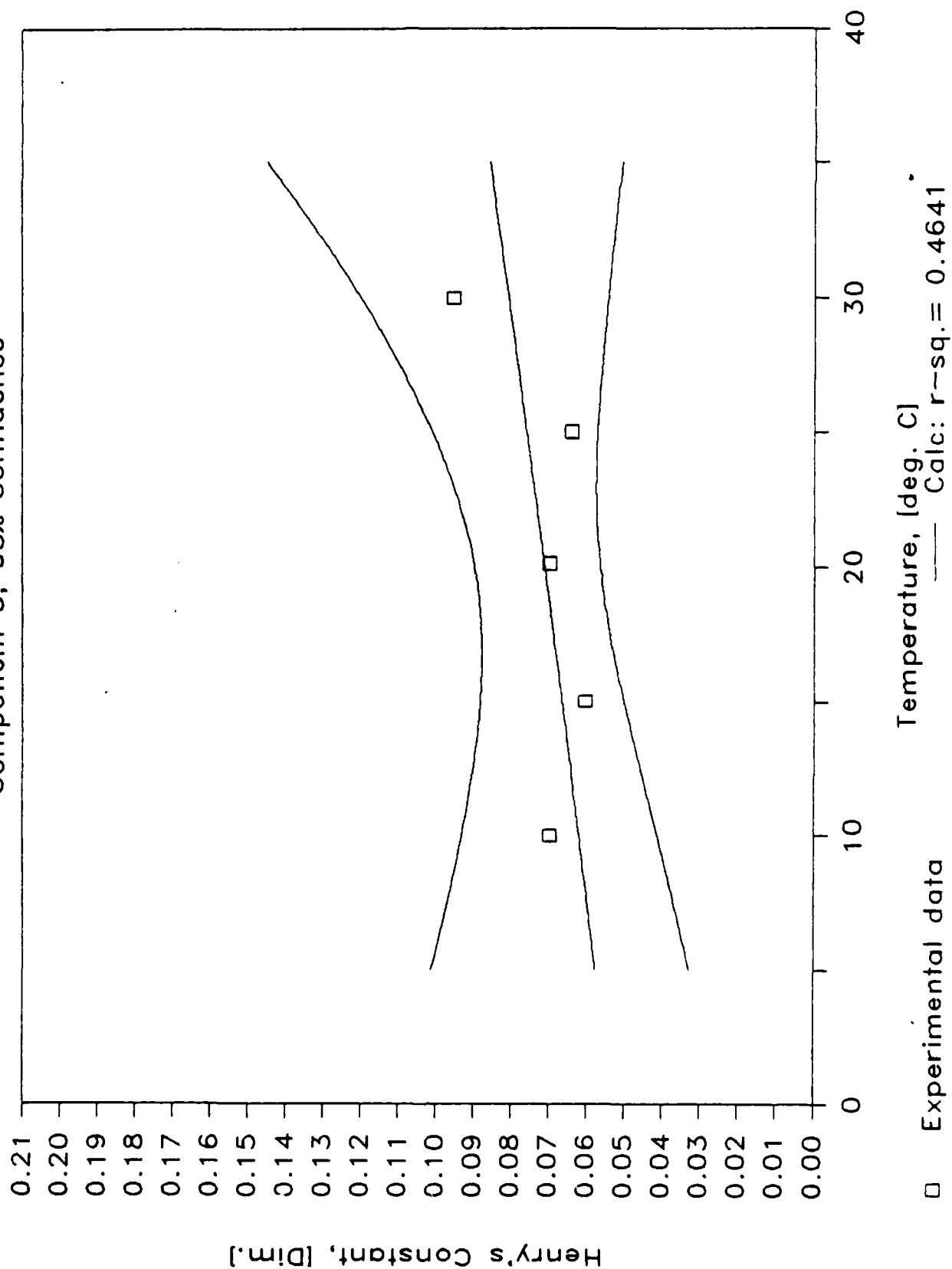
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r—sq.= 0.4641

□ Experimental data

		Temperature 1			Temperature 2			Temperature 3		
RUN Number —)		75			87			100		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		14			14			14		
Component ID		105			105			105		
Temperature (C)		10.5			15.3			19.5		
Low Vol (ml)		25			25			25		
High Vol (ml)		205			205			205		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.0522	1.0E-25		0.0463	1.0E-25		0.0848	1.0E-25	
H, avg:atm-mol/mol		67.4			60.9			113.1		
H, avg: atm-m3/mol		1.21E-03	1		1.10E-03	1		2.04E-03	1	
H, avg: kPa-m3/mol		0.1231			0.1111			0.2065		
COV, r [std/mean]		33.04			39.24			11.05		
COV, both replic.		———			———			———		
Observation: (1)		0.0706			0.0631			0.0949		
[atm-m3/m3] (2)		0.0627			0.0610			0.0904		
(3)		0.0410			0.0314			0.0791		
(4)		0.0344			0.0298			0.0749		
Injection: (1)		284150			291240			327710		
[Peak Area] (2)		239340			240000			303580		
(3)		1446700			1544500			1479300		
(4)		1509700			1562100			1511100		

		Temperature 4		Temperature 5	
RUN Number —)		88		76	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		14		14	
Component ID		105		105	
Temperature (C)		25.2		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		0.0756	1.0E-25	0.1075	1.0E-25
H,avg:atm-mol/mol		102.7		148.4	
H,avg: atm-m3/mol		1.85E-03	1	2.67E-03	1
H,avg: kPa-m3/mol		0.1875		0.2709	
COV, r [std/mean]		11.32		4.12	
COV, both replic.		———		———	
Observation:	(1)	0.0817		0.1113	
[atm-m3/m3]	(2)	0.0841		0.1037	
	(3)	0.0672		0.1113	
	(4)	0.0694		0.1036	
Injection:	(1)	457630		673370	
[Peak Area]	(2)	424430		673320	
	(3)	2200900		2825700	
	(4)	2175200		2921700	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = -3.6E+03$$

$$\text{Y-INTERCEPT} = 6.0E+00$$

$$\text{R-SQUARED} = 0.7784$$

TEMPERATURE REGRESSION PLOT

Component 105
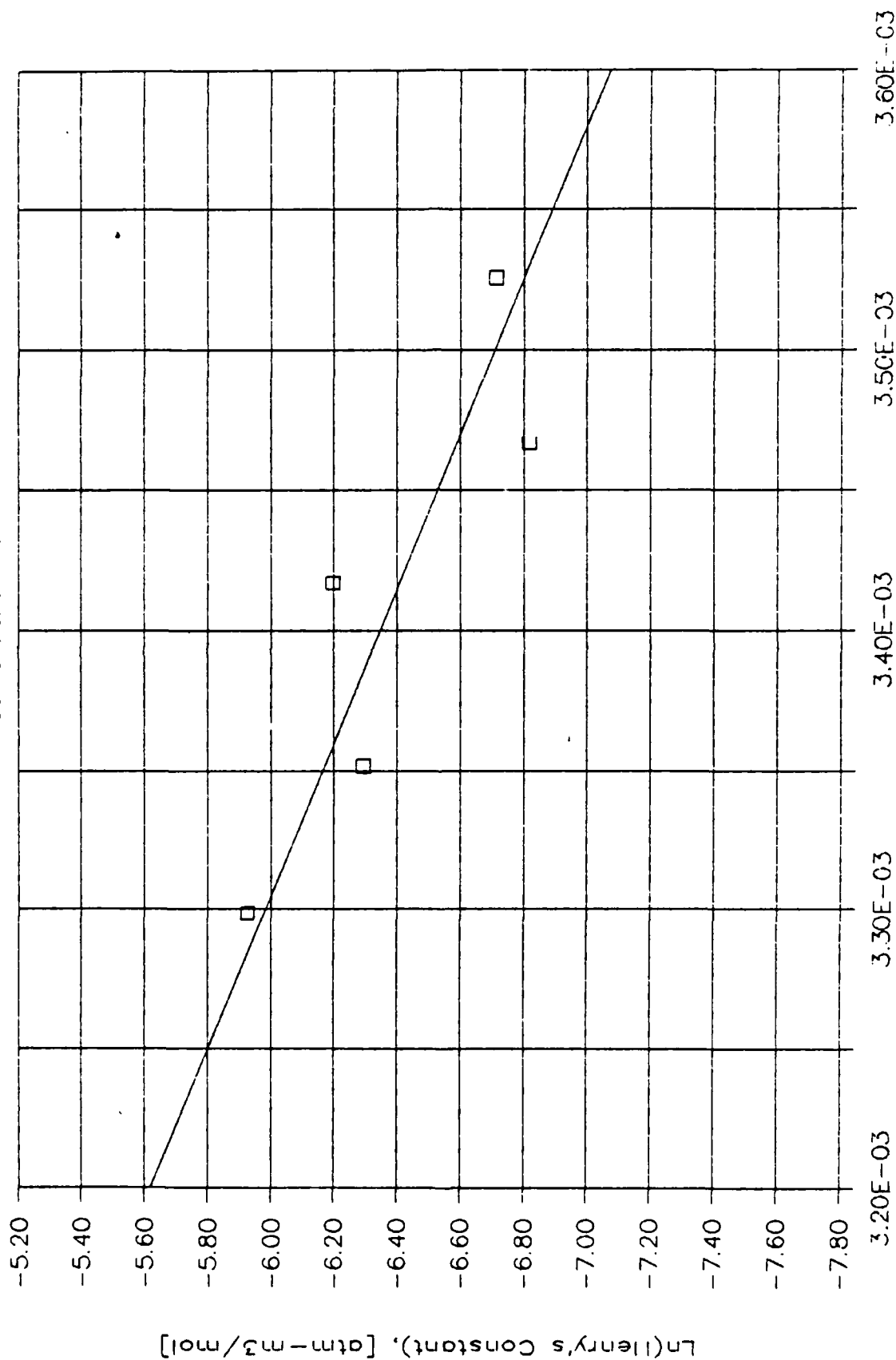
Ln(Henry's Constant), [atm–m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r~sq.= 0.7784

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95% CONFIDENCE TEST

Component 1C5

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

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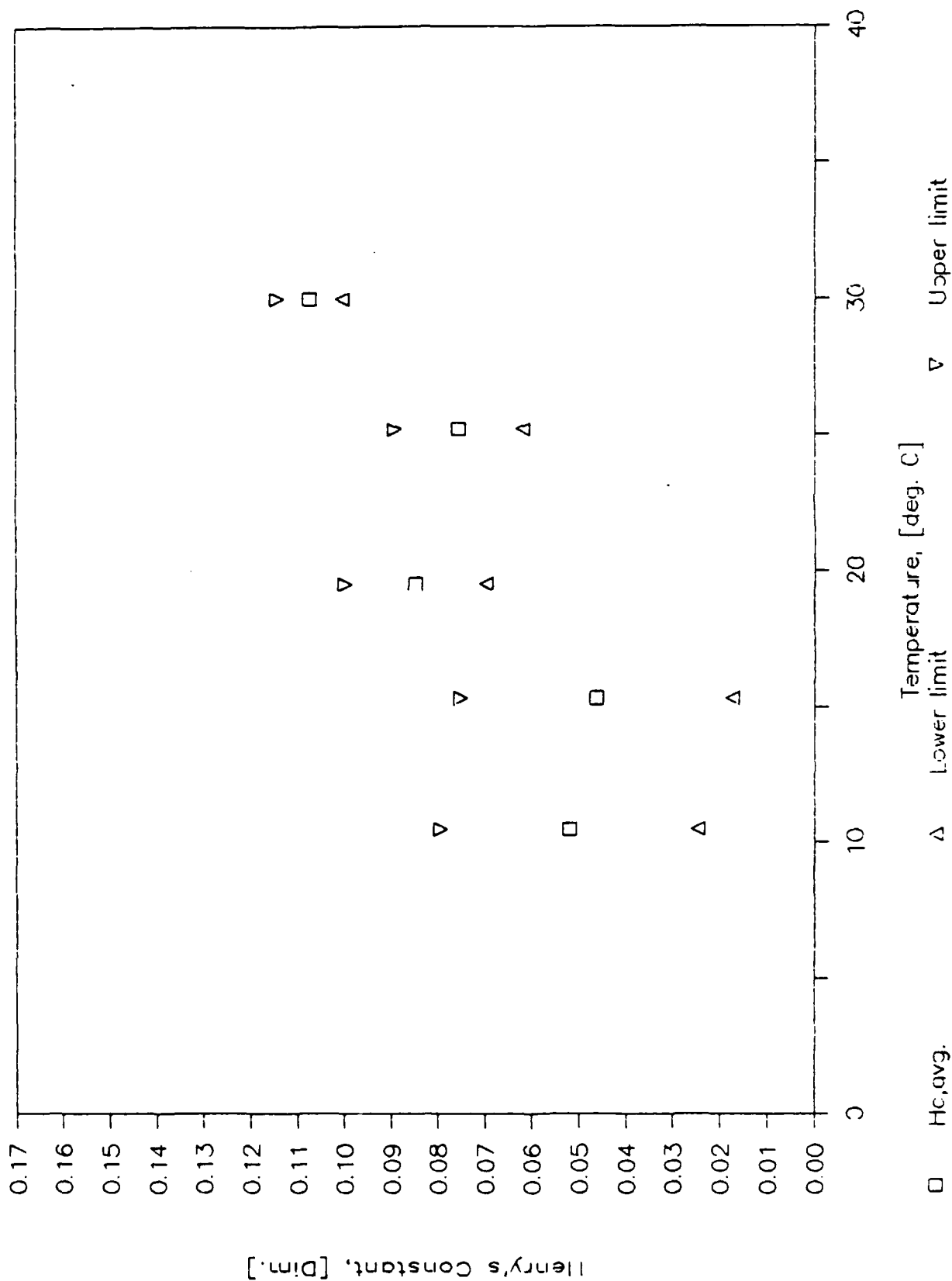
REGRESSION CONFIDENCE TEST

Component 105, 95% Confidence

Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Experimental data

—— Calc: r-sq.= 0.7784

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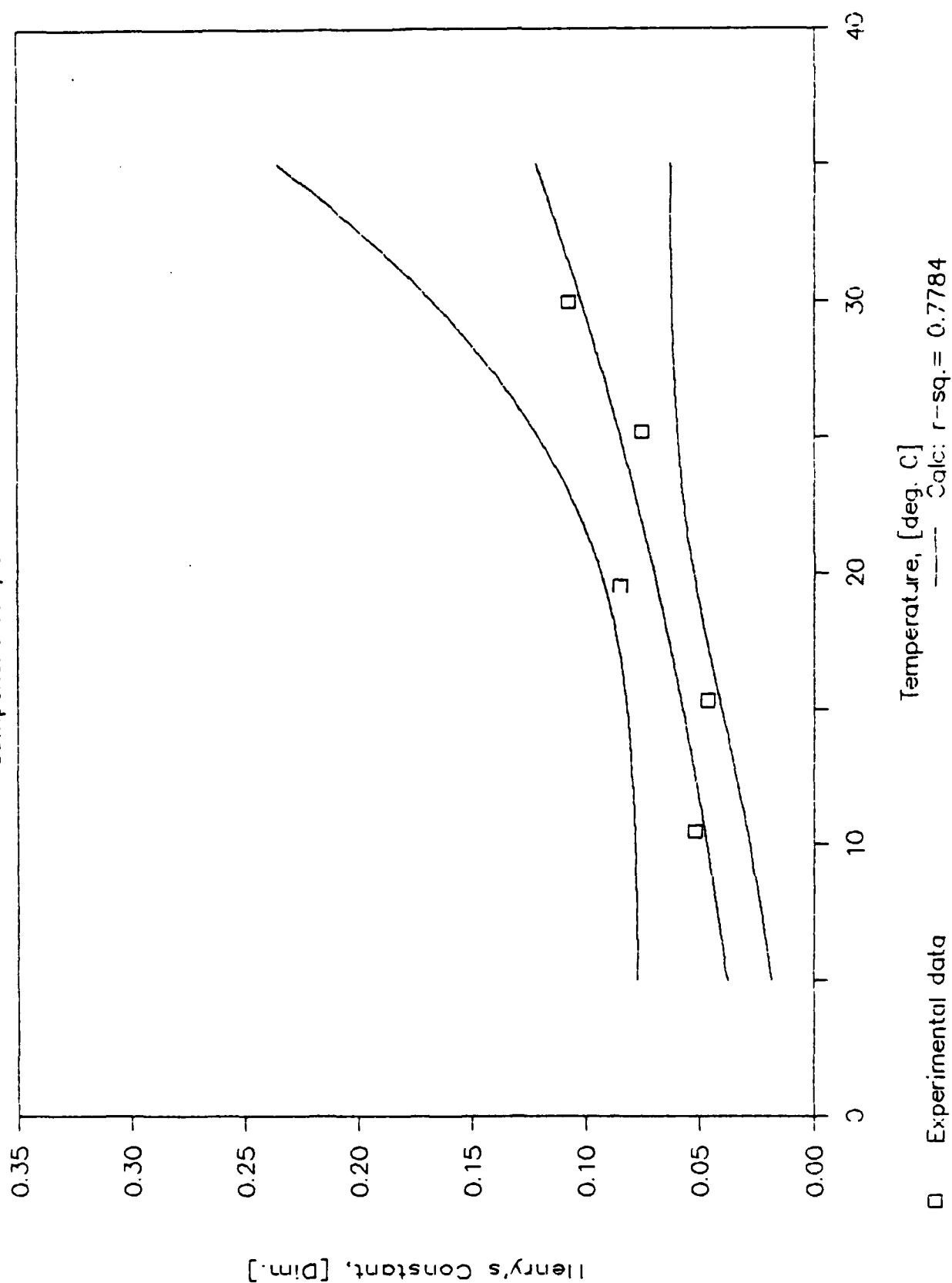
Results Summary for Component 6

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)		6		7		8	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		2		2		2	
Component ID		6		6		6	
Temperature (C)		10		15		20.1	
Low Vol (ml)		25		25		25	
High Vol (ml)		205		205		205	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.1052	1.0E-25	0.1188	1.0E-25	0.1417	1.0E-25
H, avg: atm-mol/mol		135.7		155.9		189.2	
H, avg: atm-m3/mol		2.44E-03	1	2.81E-03	1	3.41E-03	1
H, avg: kPa-m3/mol		0.2477		0.2846		0.3455	
COV, r [std/mean]		7.23		1.00		1.60	
COV, both replic.		------		------		------	
Observation: (1)		0.1079		0.1181		0.1401	
[atm-m3/m3] (2)		0.1142		0.1200		0.1394	
(3)		0.0964		0.1175		0.1440	
(4)		0.1024		0.1195		0.1432	
Injection: (1)		332510		409510		486310	
[Peak Area] (2)		315850		408560		493360	
(3)		1416100		1670200		1817900	
(4)		1378400		1656600		1822900	

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		Temperature 4		Temperature 5	
RUN Number —>		7		5	
REPLICATE —>		No. 1	No. 2	No. 1	No. 2
Group No.		2		2	
Component ID		6		6	
Temperature (C)		25		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.1470	1.0E-25	0.1902	1.0E-25
H, avg: atm-mol/mol		199.7		262.7	
H, avg: atm-m3/mol		3.60E-03	1	4.73E-03	1
H, avg: kPa-m3/mol		0.3645		0.4795	
COV, r [std/mean]		0.76		0.97	
COV, both replic.		——		——	
Observation:	(1)	0.1476		0.1892	
[atm-m3/m3]	(2)	0.1483		0.1922	
	(3)	0.1458		0.1883	
	(4)	0.1465		0.1913	
Injection:	(1)	556060		727340	
[Peak Area]	(2)	552440		725320	
	(3)	2022100		2298600	
	(4)	2016400		2276900	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-2.7E+03
Y-INTERCEPT	=	3.5E+00
R-SQUARED	=	0.9646

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TEMPERATURE REGRESSION PLOT

Component 6
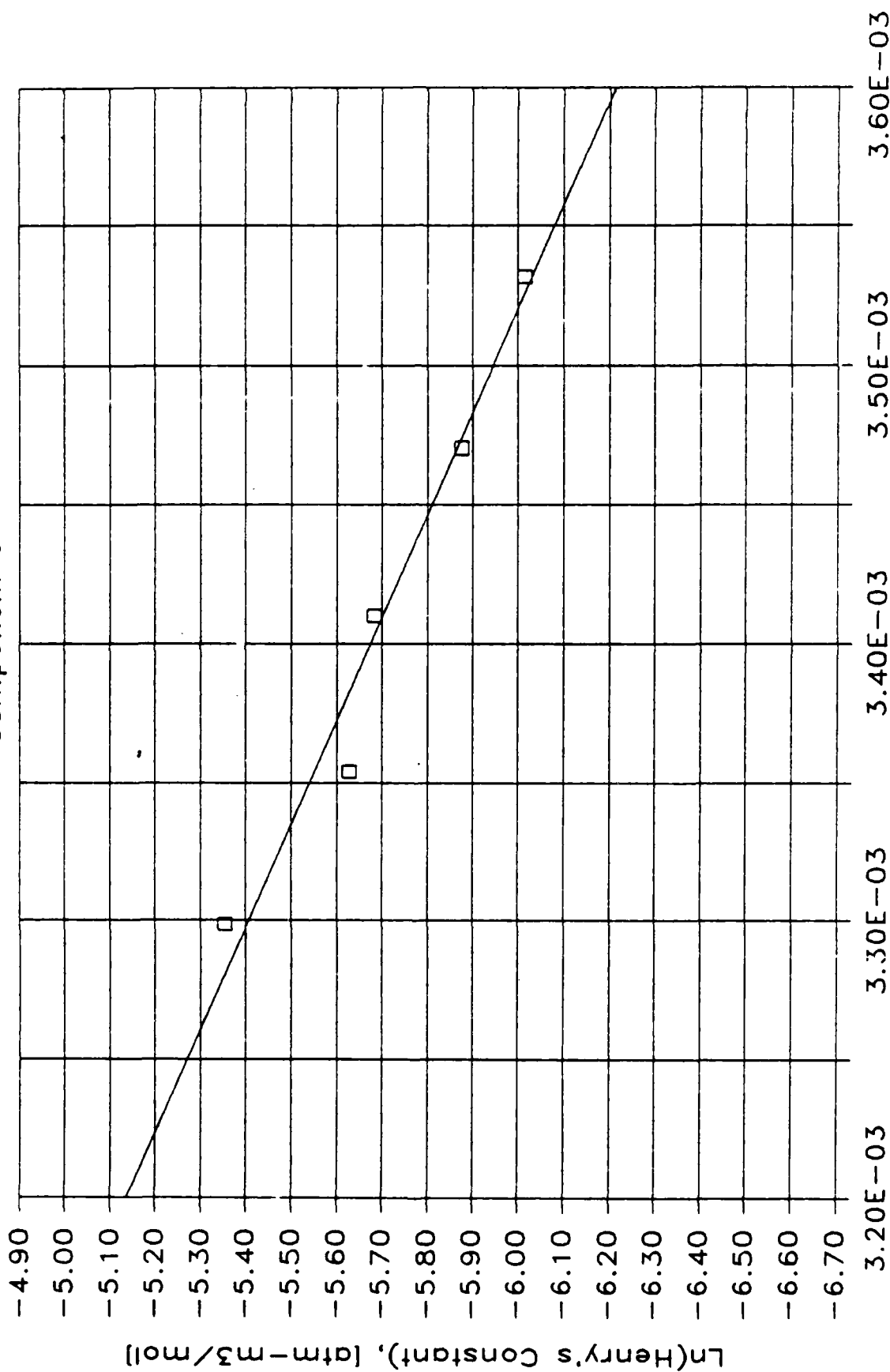
Ln(Henry's Constant), [atm–m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r–sq.= 0.9646

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95% CONFIDENCE TEST
Component 6

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

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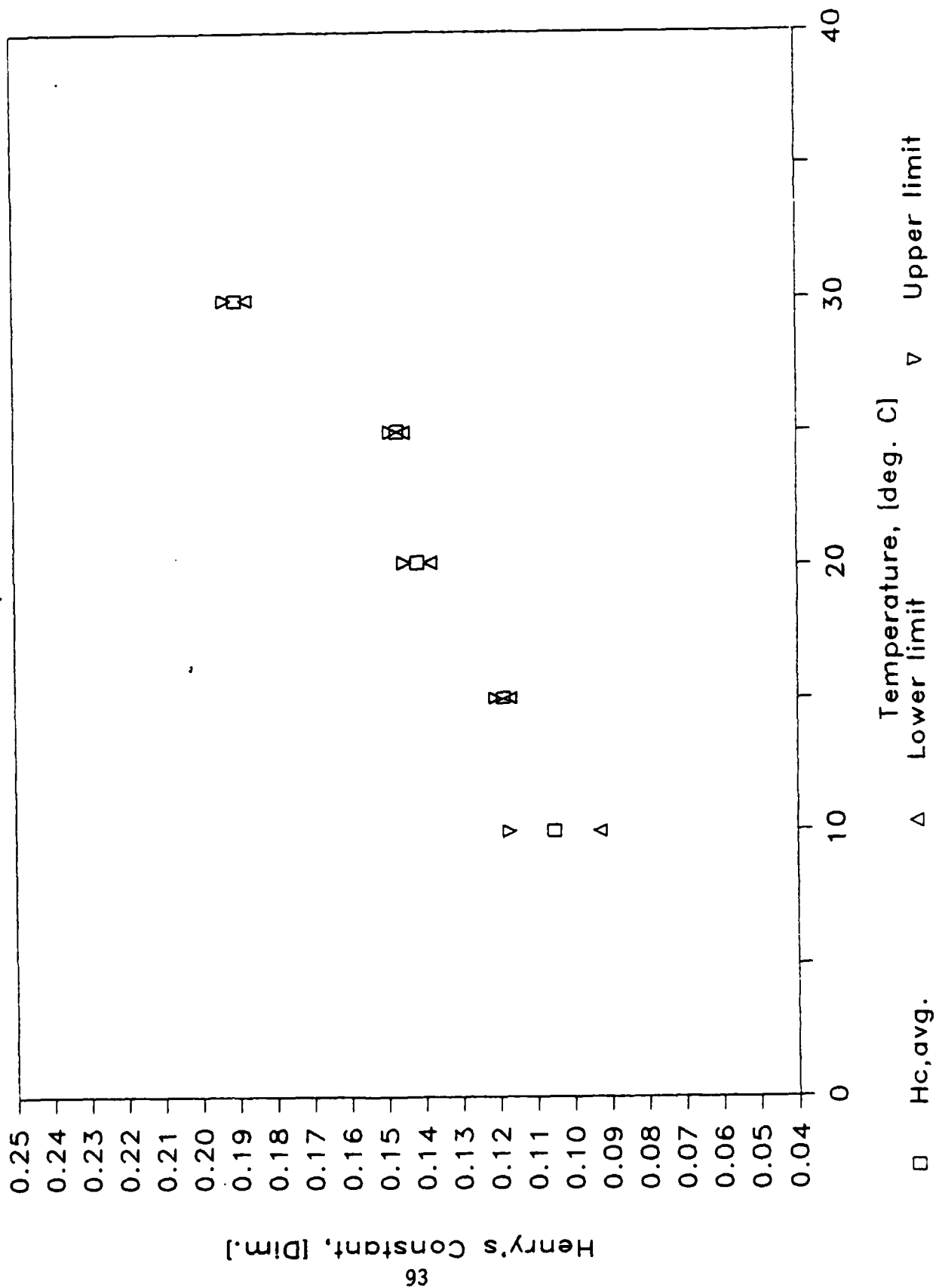
REGRESSION CONFIDENCE TEST

Component 6, 95% Confidence
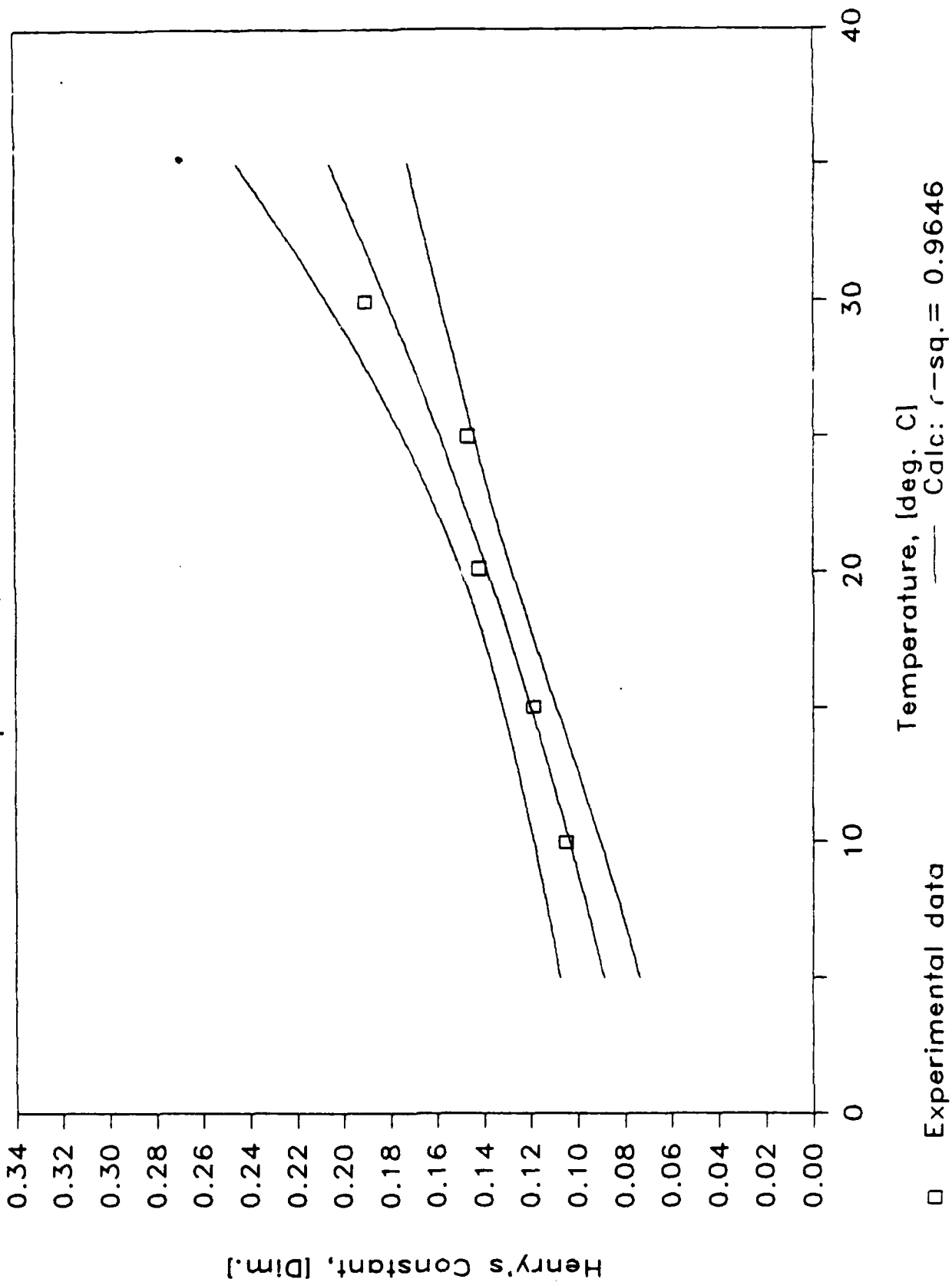
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
—— Calc: r-sq.= 0.9646

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		Temperature 1		Temperature 2		Temperature 3	
RUN Number —)		10		11		12	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		2		2		2	
Component ID		7		7		7	
Temperature (C)		10		15		20.1	
Low Vol (ml)		25		25		25	
High Vol (ml)		205		205		205	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0953	1.0E-25	0.0977	1.0E-25	0.1221	1.0E-25
H, avg: atm-mol/mol		122.9		128.2		163.0	
H, avg: atm-m3/mol		2.21E-03	1	2.31E-03	1	2.94E-03	1
H, avg: kPa-m3/mol		0.2244		0.2341		0.2976	
COV, r [std/mean]		9.48		5.99		3.81	
COV, both replic.		———		———		———	
Observation:	(1)	0.1063		0.1033		0.1215	
[atm-m3/m3]	(2)	0.0971		0.1022		0.1278	
	(3)	0.0932		0.0932		0.1164	
	(4)	0.0846		0.0921		0.1225	
Injection:	(1)	500440		553140		694170	
[Peak Area]	(2)	471490		528210		679760	
	(3)	2145900		2404100		2791500	
	(4)	2236100		2415600		2721900	

	Temperature 4		Temperature 5	
RUN Number ——)	11		9	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2
Group No.	2		2	
Component ID	7		7	
Temperature (C)	25		30	
Low Vol (ml)	25		25	
High Vol (ml)	205		205	
System Vol (ml)	250		250	
H,avg: atm-m3/m3	0.1166	1.0E-25	0.1696	1.0E-25
H,avg:atm-mol/mol	158.3		234.2	
H,avg: atm-m3/mol	2.85E-03	1	4.22E-03	1
H,avg: kPa-m3/mol	0.2890		0.4276	
COV, r [std/mean]	0.59		4.16	
COV, both replic.	———		———	
Observation: (1)	0.1160		0.1781	
[atm-m3/m3] (2)	0.1160		0.1677	
(3)	0.1172		0.1714	
(4)	0.1172		0.1612	
Injection: (1)	824190		1093500	
[Peak Area] (2)	828310		1069500	
(3)	3390000		3579100	
(4)	3390700		3704500	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -2.6E+03

Y-INTERCEPT   =   2.9E+00

R-SQUARED   =   0.8501

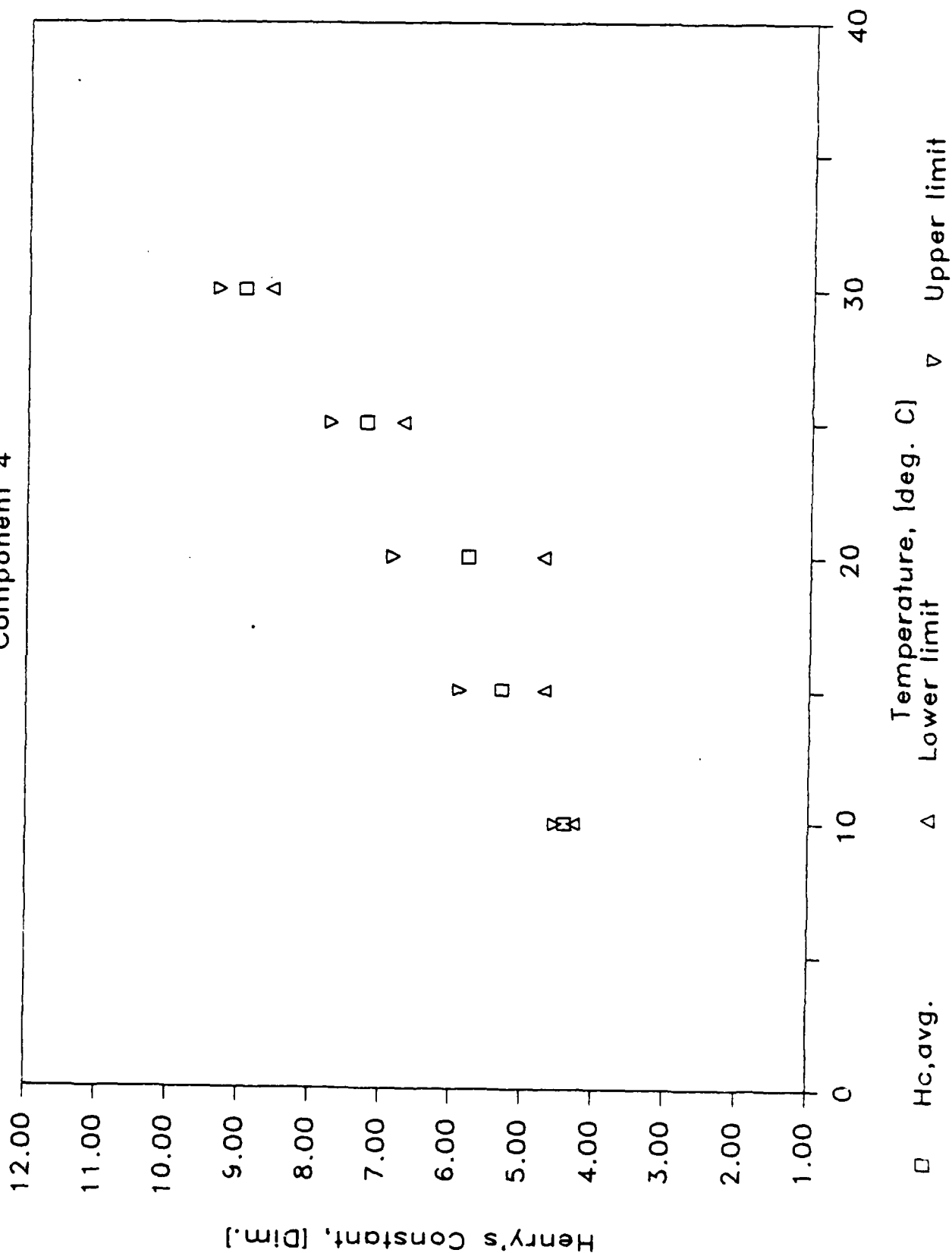# TEMPERATURE REGRESSION PLOT

Component 7
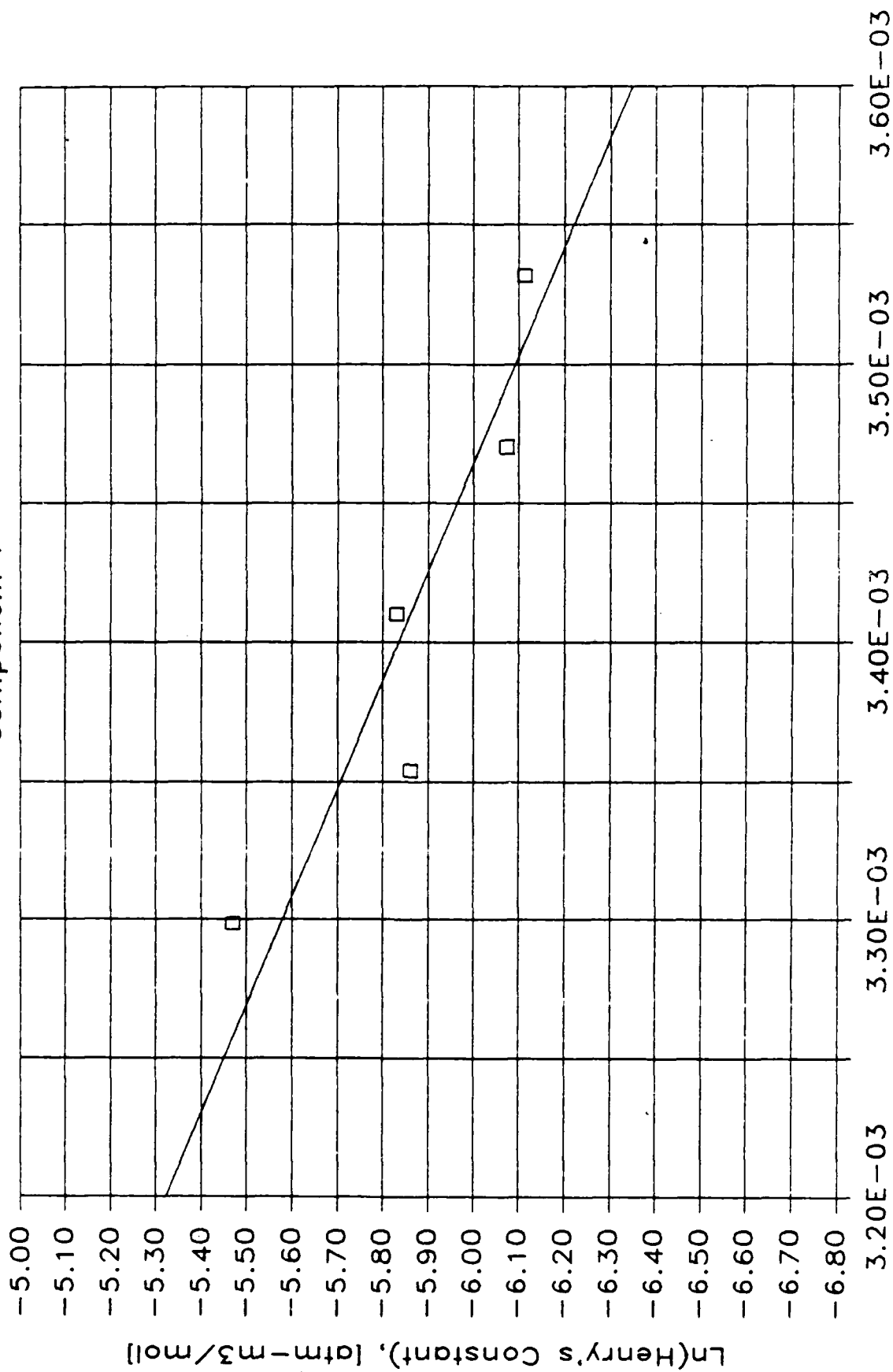
Y-axis: Ln(Henry's Constant), [atm-m3/mol]

X-axis: Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.8501

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95% CONFIDENCE TEST

Component 7

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

REGRESSION CONFIDENCE TEST

Component 7, 95% Confidence
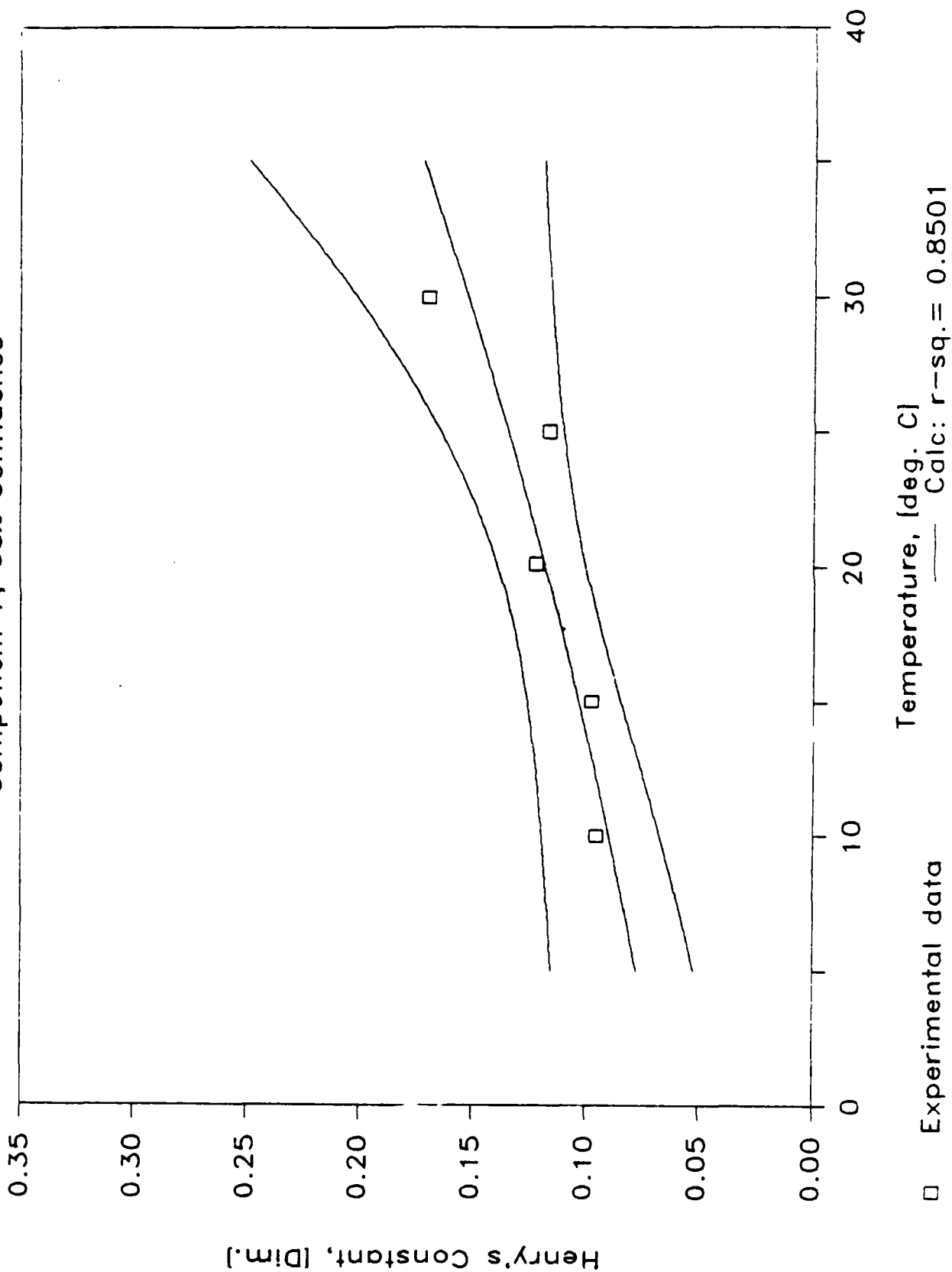
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r–sq.= 0.8501

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		Temperature 1		Temperature 2		Temperature 3		
RUN Number —)		79		91		104		
REPLICATE —)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	
Group No.		14		14		14		
Component ID		107		107		107		
Temperature (C)		10.5		15.3		19.5		
Low Vol (ml)		25		25		25		
High Vol (ml)		205		205		205		
System Vol (ml)		250		250		250		
H, avg: atm-m3/m3		0.0506	1.0E-25	0.0994	1.0E-25	0.1215	1.0E-25	
H, avg:atm-mol/mol		65.4		130.6		161.9		
H, avg: atm-m3/mol		1.18E-03	1	2.35E-03	1	2.92E-03	1	
H, avg: kPa-m3/mol		0.1194		0.2384		0.2956		
COV, r [std/mean]		16.52		16.97		19.71		
COV, both replic.		——		——		——		
Observation: (1)		0.0607		0.1128		0.1160		
[atm-m3/m3] (2)		0.0478		0.1151		0.1513		
(3)		0.0532		0.0838		0.0935		
(4)		0.0409		0.0858		0.1251		
Injection: (1)		193660		263660		265060		
[Peak Area] (2)		185550		230970		239940		
(3)		1040900		1099300		1090600		
(4)		1122100		1088800		950770		

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		Temperature 4		Temperature 5	
RUN Number ---)	i	92		80	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		14		14	
Component ID		107		107	
Temperature (C)		25.2		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.1231	1.0E-25	0.1501	1.0E-25
H, avg: atm-mol/mol		167.2		207.2	
H, avg: atm-m3/mol		3.01E-03	1	3.73E-03	1
H, avg: kPa-m3/mol		0.3053		0.3782	
COV, r [std/mean]		20.19		4.92	
COV, both replic.		------		------	
Observation: (1)		0.1462		0.1525	
[atm-m3/m3] (2)		0.1429		0.1414	
(3)		0.1029		0.1588	
(4)		0.1003		0.1475	
Injection: (1)		419960		578310	
[Peak Area] (2)		352660		591410	
(3)		1535000		2065800	
(4)		1553600		2151100	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

    # OF POINTS   =   5

        SLOPE   =   -4.5E+03

    Y-INTERCEPT   =   9.2E+00

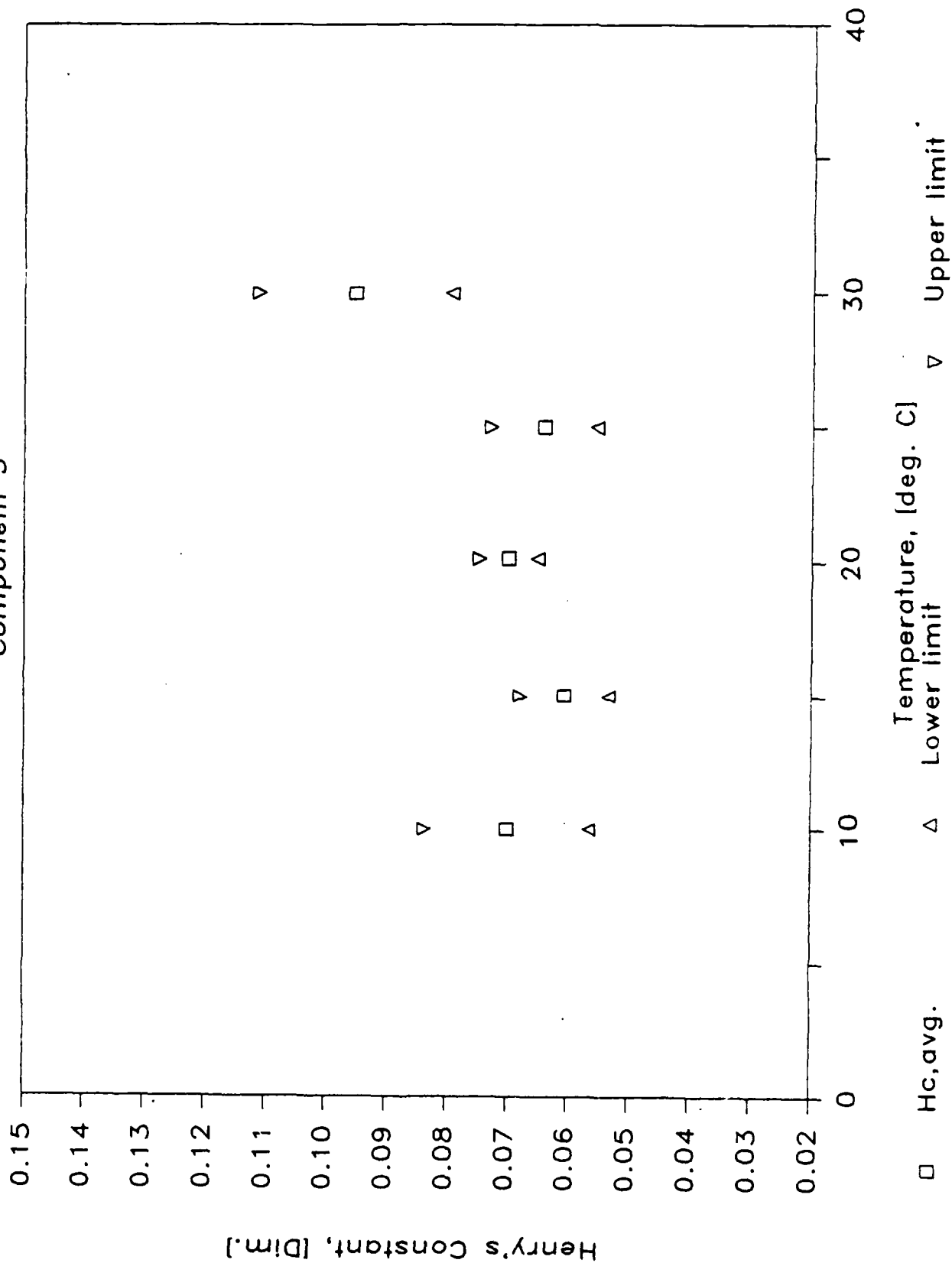   R-SQUARED   =   0.8196

TEMPERATURE REGRESSION PLOT

Component 107

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□   Experimental data

——   Regr: r-sq.= 0.8196
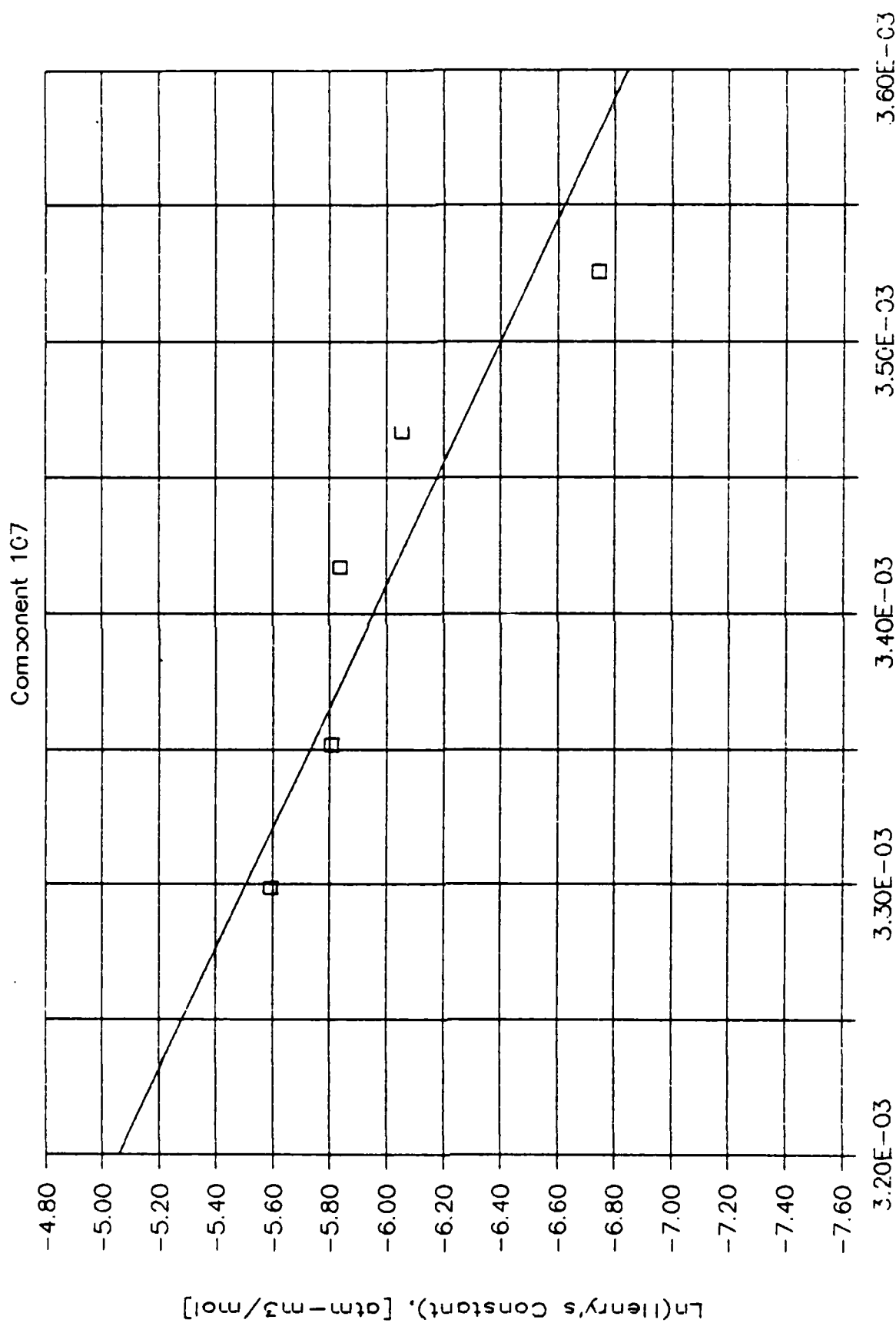
95% CONFIDENCE TEST
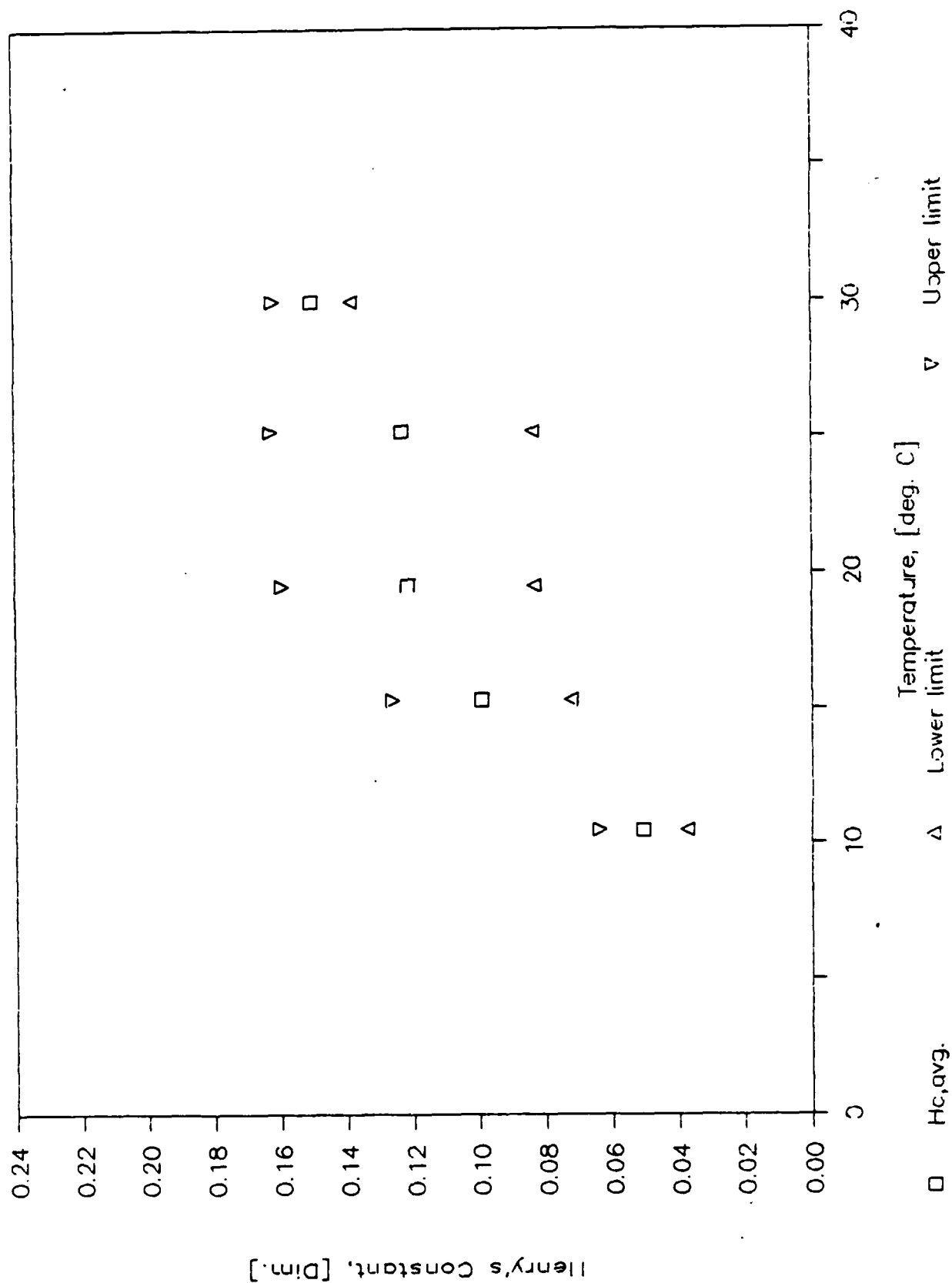
Component 107

REGRESSION CONFIDENCE TEST

Component 107, 95% Confidence
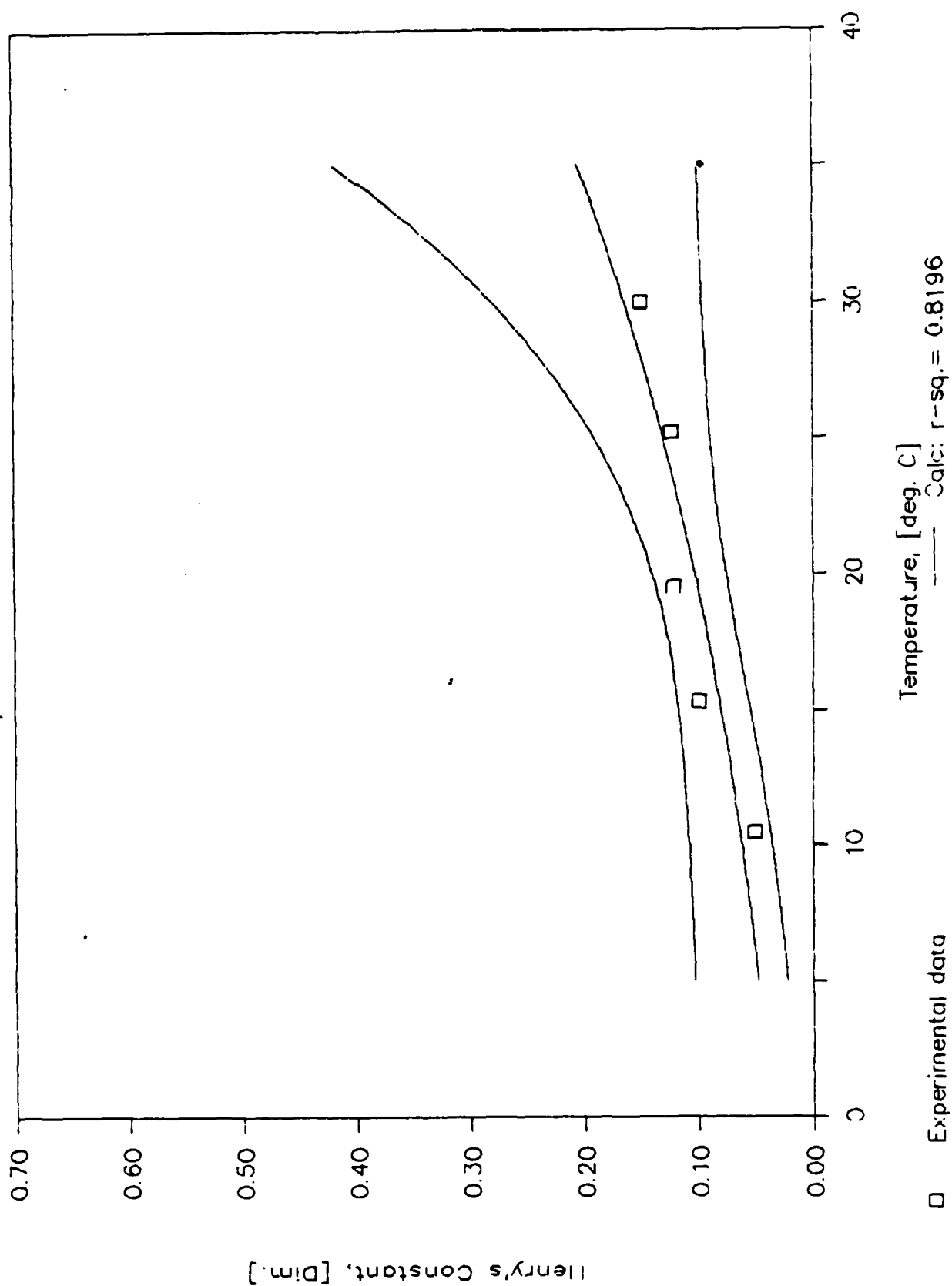
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.8196

□   Experimental data

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	Temperature 1		Temperature 2		Temperature 3	
RUN Number —>	14		15		16	
REPLICATE —>	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	2		2		2	
Component ID	8		8		8	
Temperature (C)	10		15		20.1	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.0912	1.0E-25	0.0918	1.0E-25	0.1075	1.0E-25
H, avg: atm-mol/mol	117.6		120.5		143.6	
H, avg: atm-m3/mol	2.12E-03	1	2.17E-03	1	2.59E-03	1
H, avg: kPa-m3/mol	0.2148		0.2200		0.2622	
COV, r [std/mean]	5.03		5.59		4.08	
COV, both replic.	——		——		——	
Observation: (1)	0.0857		0.0965		0.1129	
[atm-m3/m3] (2)	0.0901		0.0960		0.1075	
(3)	0.0923		0.0877		0.1075	
(4)	0.0968		0.0871		0.1022	
Injection: (1)	254220		289000		356620	
[Peak Area] (2)	262270		277250		348390	
(3)	1198000		1295300		1486100	
(4)	1173900		1298800		1521500	

		Temperature 4			Temperature 5		
RUN Number ——)		15			13		
REPLICATE ——)		No. 1	No. 2		No. 1	No. 2	
Group No.		2			2		
Component ID		8			8		
Temperature (C)		25			30		
Low Vol (ml)		25			25		
High Vol (ml)		205			205		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		0.1296	1.0E-25		0.1563	1.0E-25	
H, avg: atm-mol/mol		176.0			215.8		
H, avg: atm-m3/mol		3.17E-03	1		3.89E-03	1	
H, avg: kPa-m3/mol		0.3212			0.3940		
COV, r [std/mean]		8.35			9.17		
COV, both replic.		———			———		
Observation: (1)		0.1428			0.1741		
[atm-m3/m3] (2)		0.1273			0.1571		
(3)		0.1315			0.1549		
(4)		0.1167			0.1391		
Injection: (1)		463370			549630		
[Peak Area] (2)		443770			514710		
(3)		1714600			1822700		
(4)		1820400			1931400		

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-2.7E+03
Y-INTERCEPT	=	3.4E+00
R-SQUARED	=	0.9411

TEMPERATURE REGRESSION PLOT

Component 8
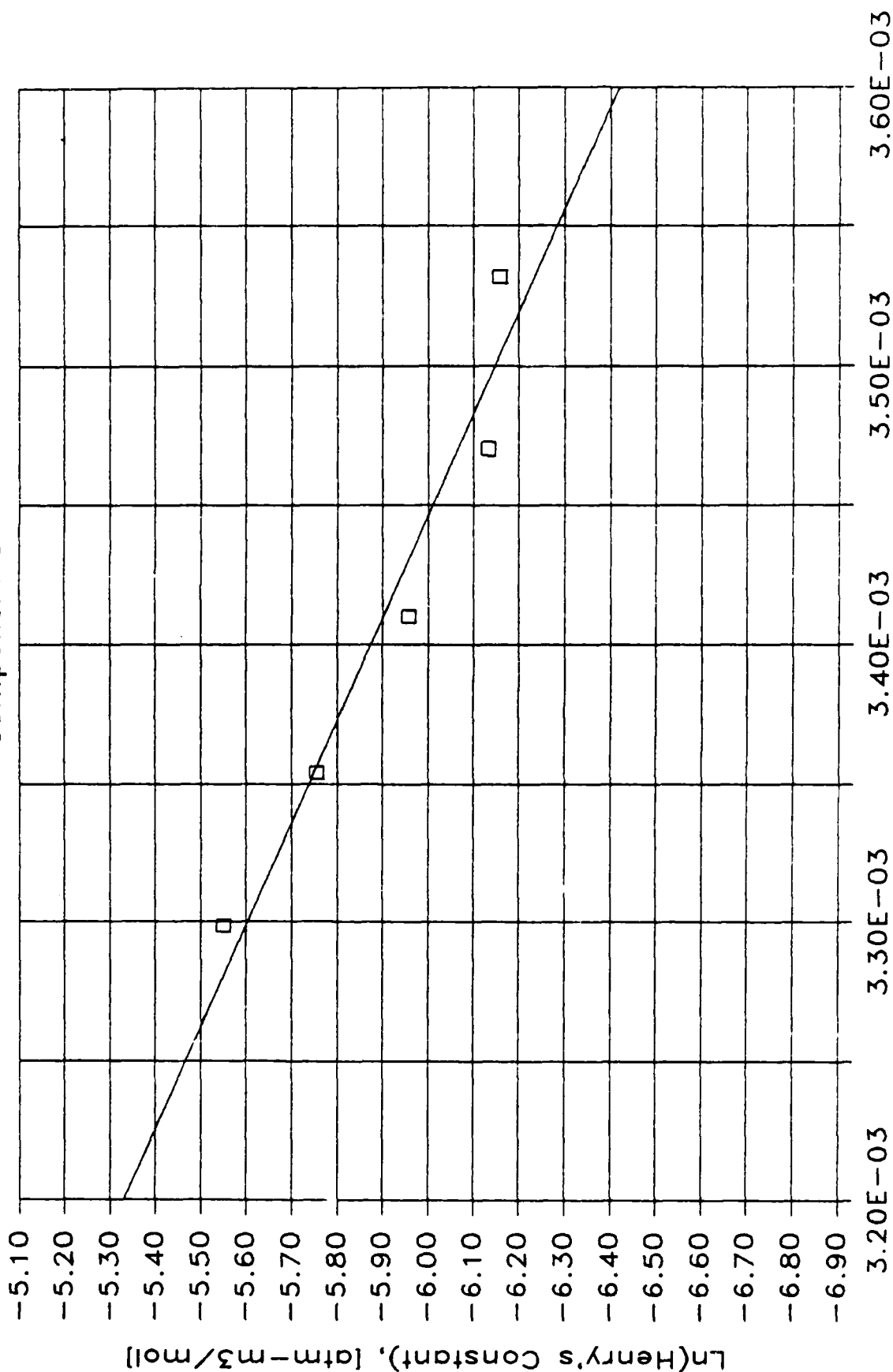
Ln(Henry's Constant), [atm-m3/mol] vs Reciprocal Temperature, [1/K]

Regr: r-sq.= 0.9411

□ Experimental data

95% CONFIDENCE TEST

Component B
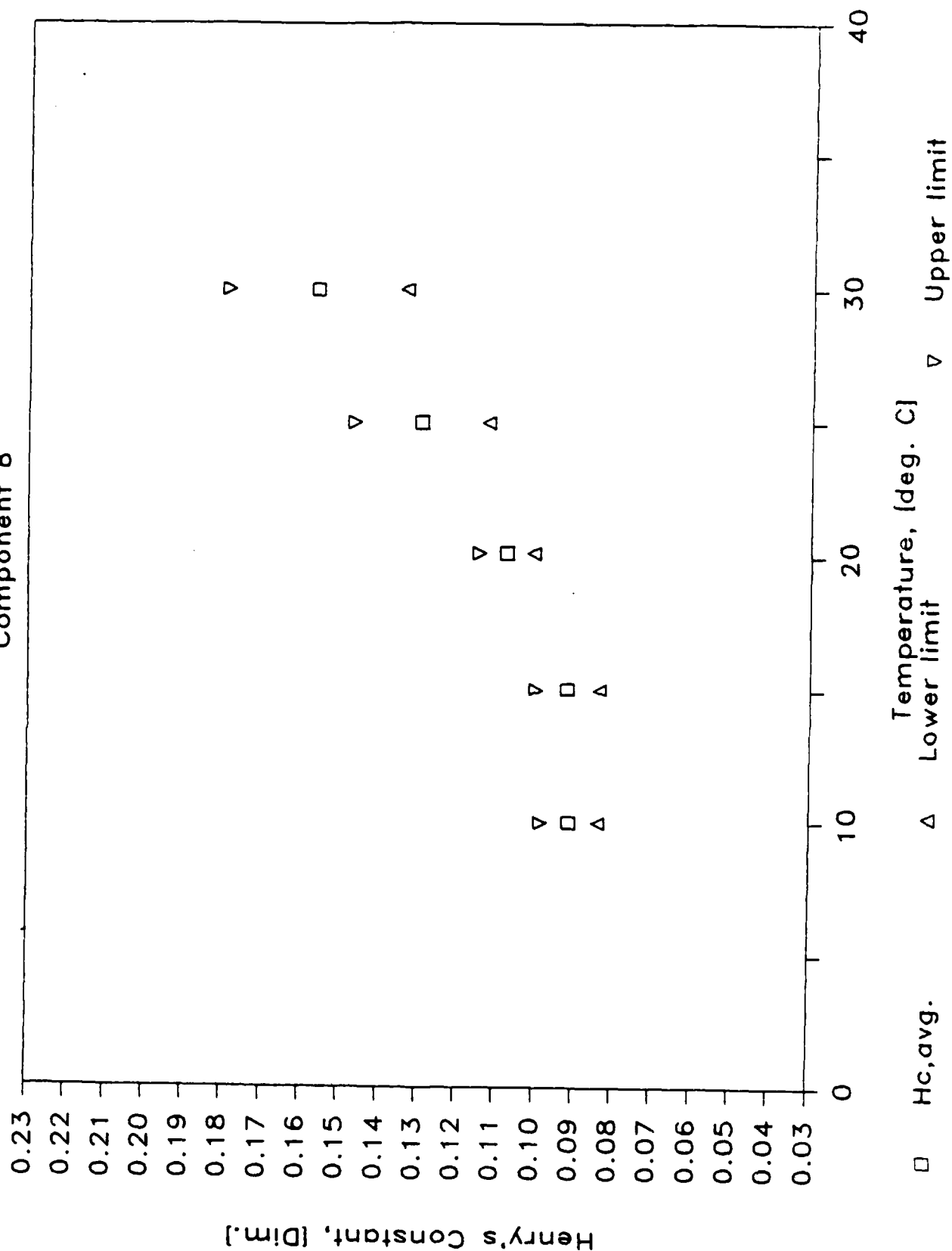
REGRESSION CONFIDENCE TEST

Component 8, 95% Confidence
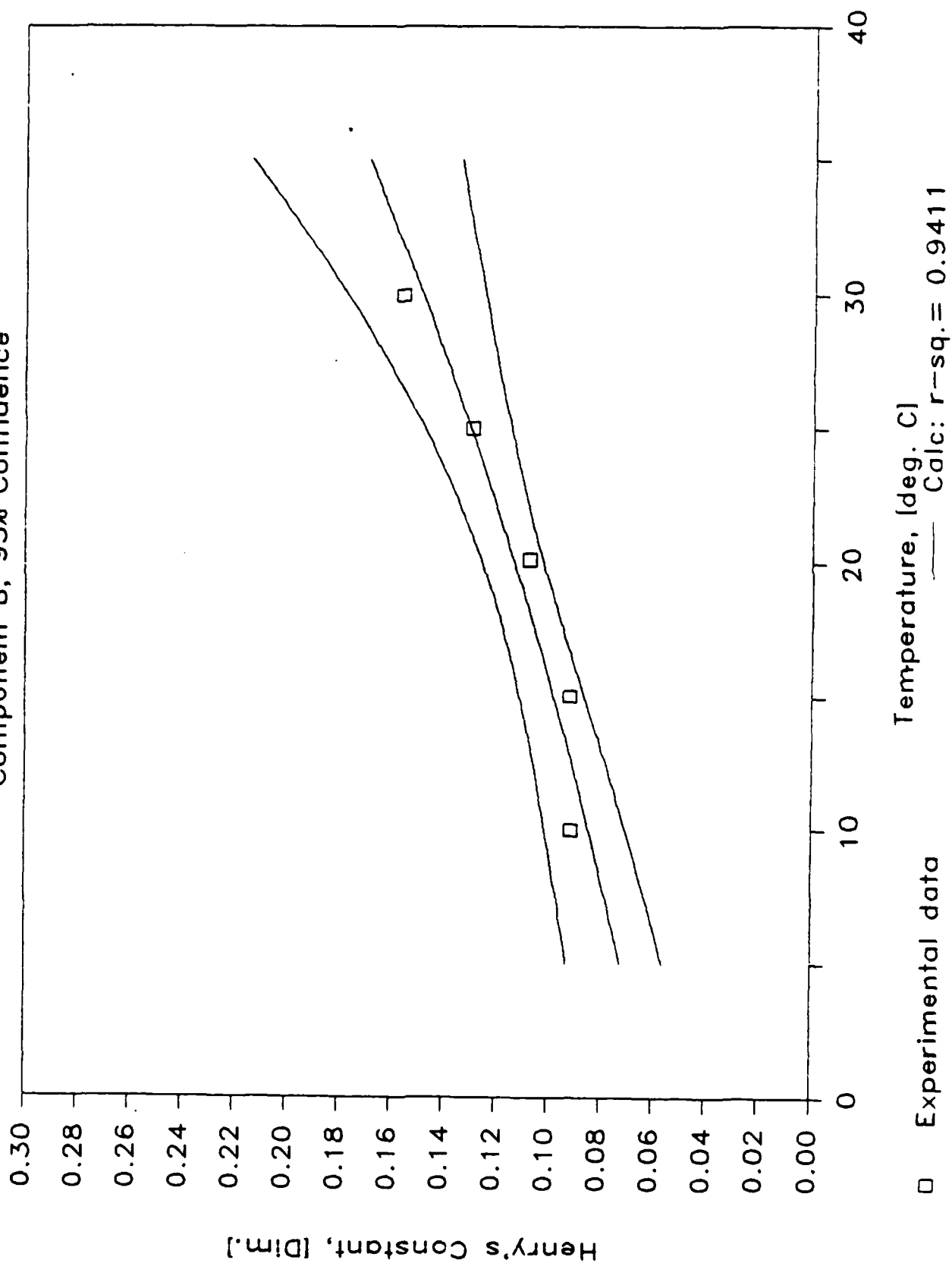
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r—sq.= 0.9411

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	83		96		107	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	14		14		14	
Component ID	108		108		108	
Temperature (C)	10.5		15.3		19.5	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.0700	1.0E-25	0.0909	1.0E-25	0.1034	1.0E-25
H, avg: atm-mol/mol	90.4		119.5		137.9	
H, avg: atm-m3/mol	1.63E-03	1	2.15E-03	1	2.48E-03	1
H, avg: kPa-m3/mol	0.1650		0.2181		0.2517	
COV, r [std/mean]	21.53		13.64		16.65	
COV, both replic.	——		——		——	
Observation: (1)	0.0778		0.1017		0.1089	
[atm-m3/m3] (2)	0.0868		0.1016		0.1241	
(3)	0.0537		0.0802		0.0837	
(4)	0.0615		0.0801		0.0970	
Injection: (1)	216910		262360		290240	
[Peak Area] (2)	190240		236960		258320	
(3)	1064100		1148300		1230600	
(4)	1017500		1148700		1154800	

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		Temperature 4		Temperature 5	
RUN Number —)		97		84	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		14		14	
Component ID		108		108	
Temperature (C)		25.2		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.1159	1.0E-25	0.1607	1.0E-25
H, avg:atm-mol/mol		157.6		221.9	
H, avg: atm-m3/mol		2.84E-03	1	4.00E-03	1
H, avg: kPa-m3/mol		0.2876		0.4050	
COV, r [std/mean]		1.69		10.89	
COV, both replic.		——		——	
Observation:	(1)	0.1171		0.1765	
[atm-m3/m3]	(2)	0.1181		0.1461	
	(3)	0.1138		0.1752	
	(4)	0.1148		0.1450	
Injection:	(1)	388280		564590	
[Peak Area]	(2)	383020		562200	
	(3)	1590200		1858000	
	(4)	1583700		2063900	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = -3.6E+03$$

$$\text{Y-INTERCEPT} = 6.4E+00$$

$$\text{R-SQUARED} = 0.9671$$

TEMPERATURE REGRESSION PLOT
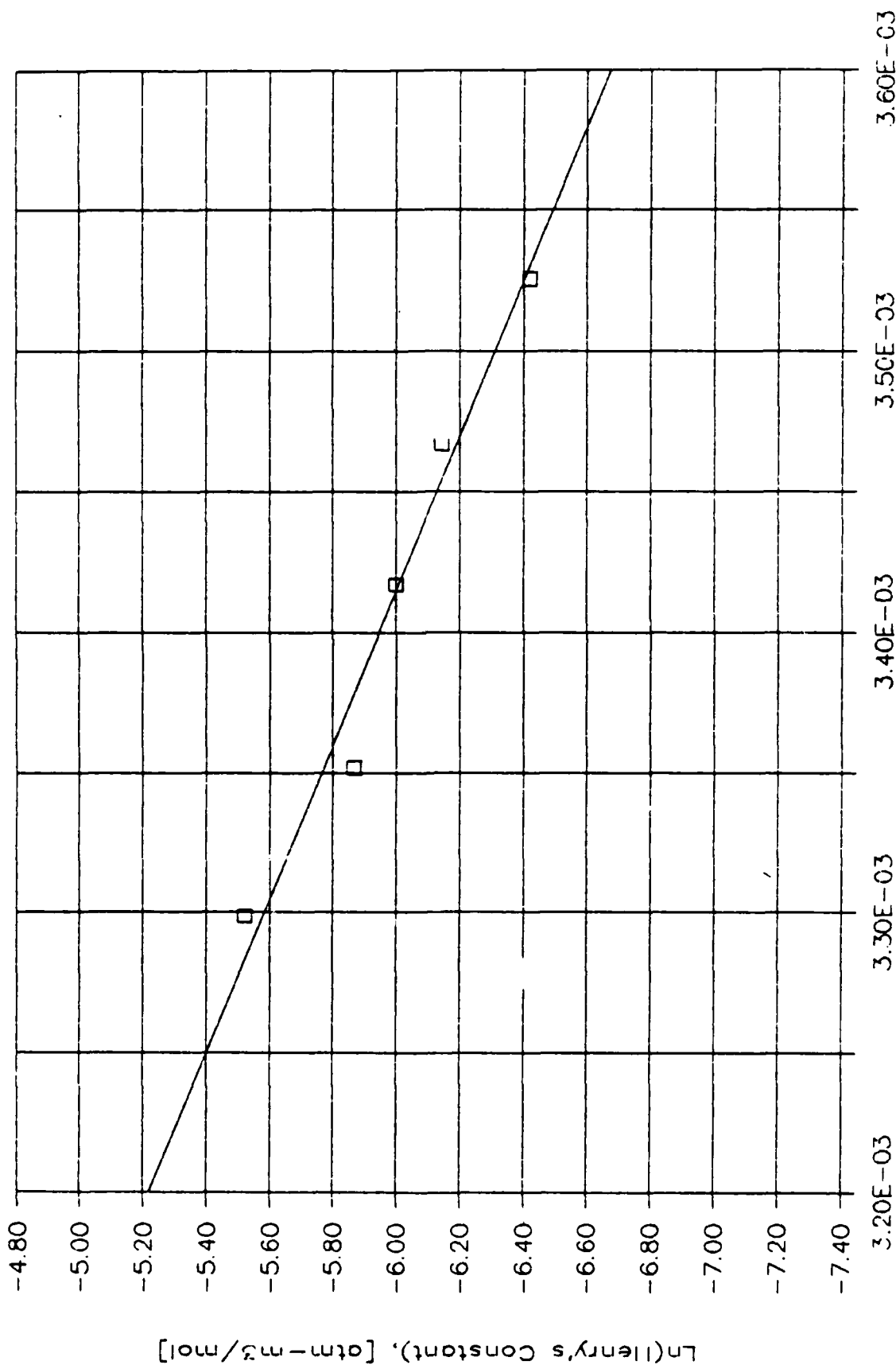
Component 108

Experimental data

Regr: r-sq. = 0.9671

Reciprocal Temperature, [1/K]

Ln(Henry's Constant), [atm-m3/mol]

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95% CONFIDENCE TEST

Component 108

Henry's Constant [Dim.]

Temperature, [deg. C]

△ Lower limit   ▽ Upper limit   □ Hc,avg.
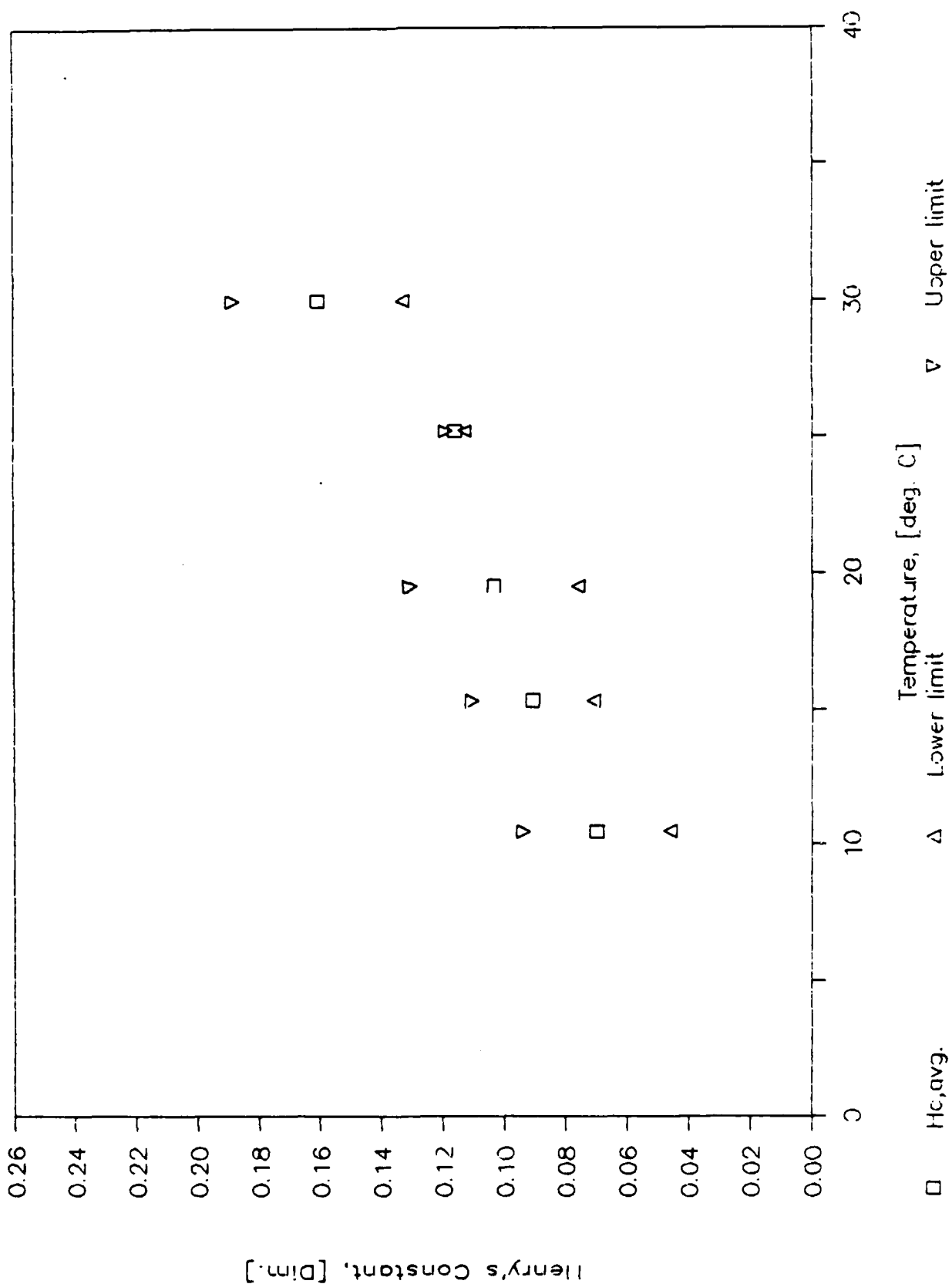
REGRESSION CONFIDENCE TEST

Component 108, 95% Confidence
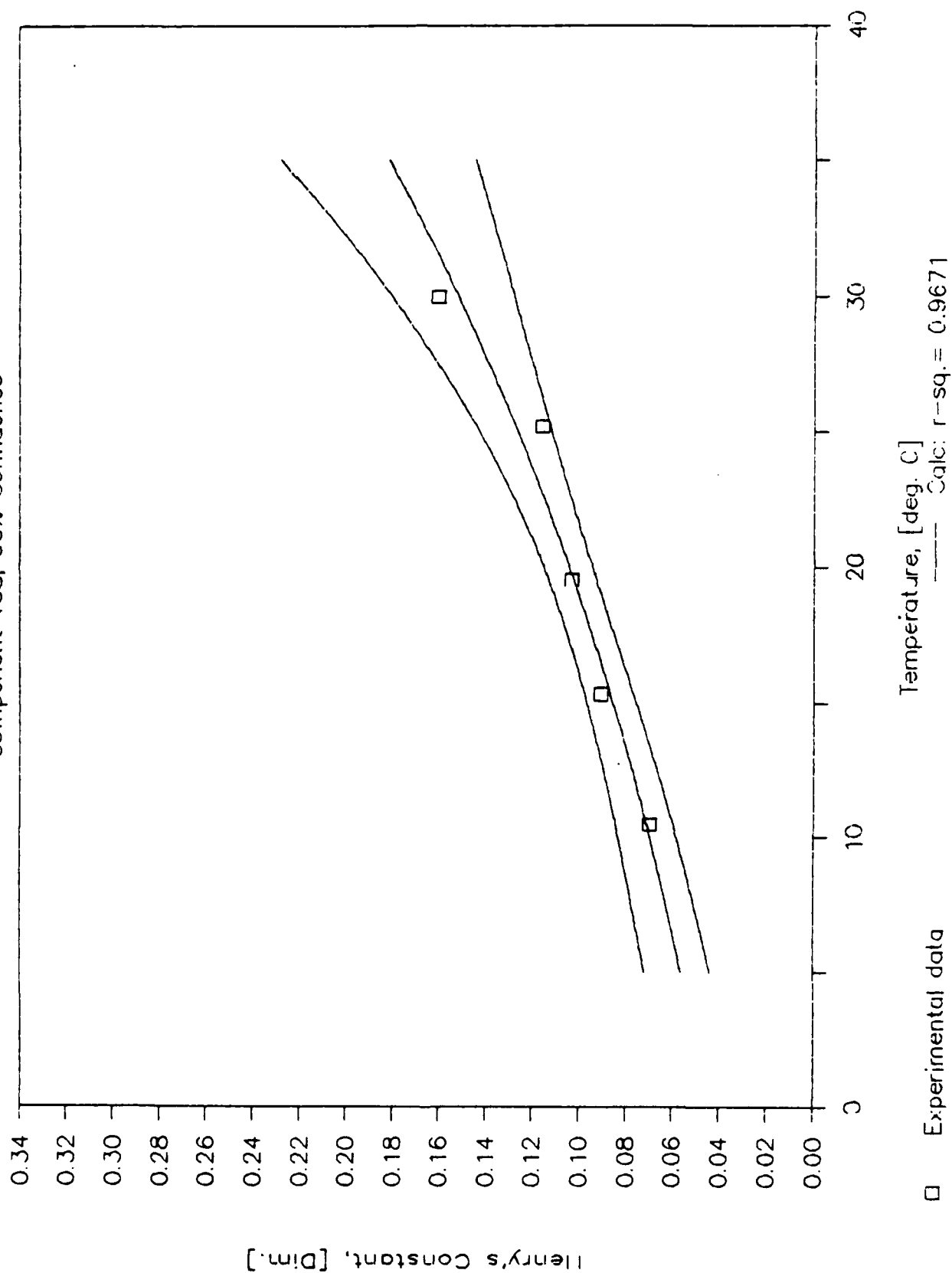
Temperature, [deg. C]

Henry's Constant, [Dim.]

□   Experimental data

———   Calc: r-sq. = 0.9671

		Temperature 1			Temperature 2			Temperature 3		
RUN Number ——)		2			1			2		
REPLICATE ——)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		3			3			3		
Component ID		9			9			9		
Temperature (C)		10			15			20.2		
Low Vol (ml)		30			30			30		
High Vol (ml)		210			210			210		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.1228	1.0E-25		0.1528	1.0E-25		0.1969	1.0E-25	
H, avg:atm-mol/mol		158.4			200.6			263.1		
H, avg: atm-m3/mol		2.85E-03	1		3.61E-03	1		4.74E-03	1	
H, avg: kPa-m3/mol		0.2891			0.3661			0.4803		
COV, r [std/mean]		5.30			5.04			5.62		
COV, both replic.		———			———			———		
Observation: (1)		0.1207			0.1519			0.2041		
[atm-m3/m3] (2)		0.1305			0.1623			0.2084		
(3)		0.1152			0.1435			0.1855		
(4)		0.1248			0.1536			0.1896		
Injection: (1)		427950			545320			695270		
[Peak Area] (2)		419230			530300			659600		
(3)		1625900			1858200			2025300		
(4)		1568600			1796800			2001300		

		Temperature 4		Temperature 5	
RUN Number —)		3		12	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		3		3	
Component ID		9		9	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.1989	1.0E-25	0.2516	1.0E-25
H, avg: atm-mol/mol		270.1		347.5	
H, avg: atm-m3/mol		4.87E-03	1	6.26E-03	1
H, avg: kPa-m3/mol		0.4930		0.6343	
COV, r [std/mean]		2.11		1.93	
COV, both replic.		——		——	
Observation:	(1)	0.2006		0.2459	
[atm-m3/m3]	(2)	0.2037		0.2501	
	(3)	0.1940		0.2531	
	(4)	0.1971		0.2574	
Injection:	(1)	826730		1048900	
[Peak Area]	(2)	811700		1067300	
	(3)	2431700		2741800	
	(4)	2410500		2714000	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.2E+03
Y-INTERCEPT	=	5.5E+00
R-SQUARED	=	0.9659

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TEMPERATURE REGRESSION PLOT

Component 9

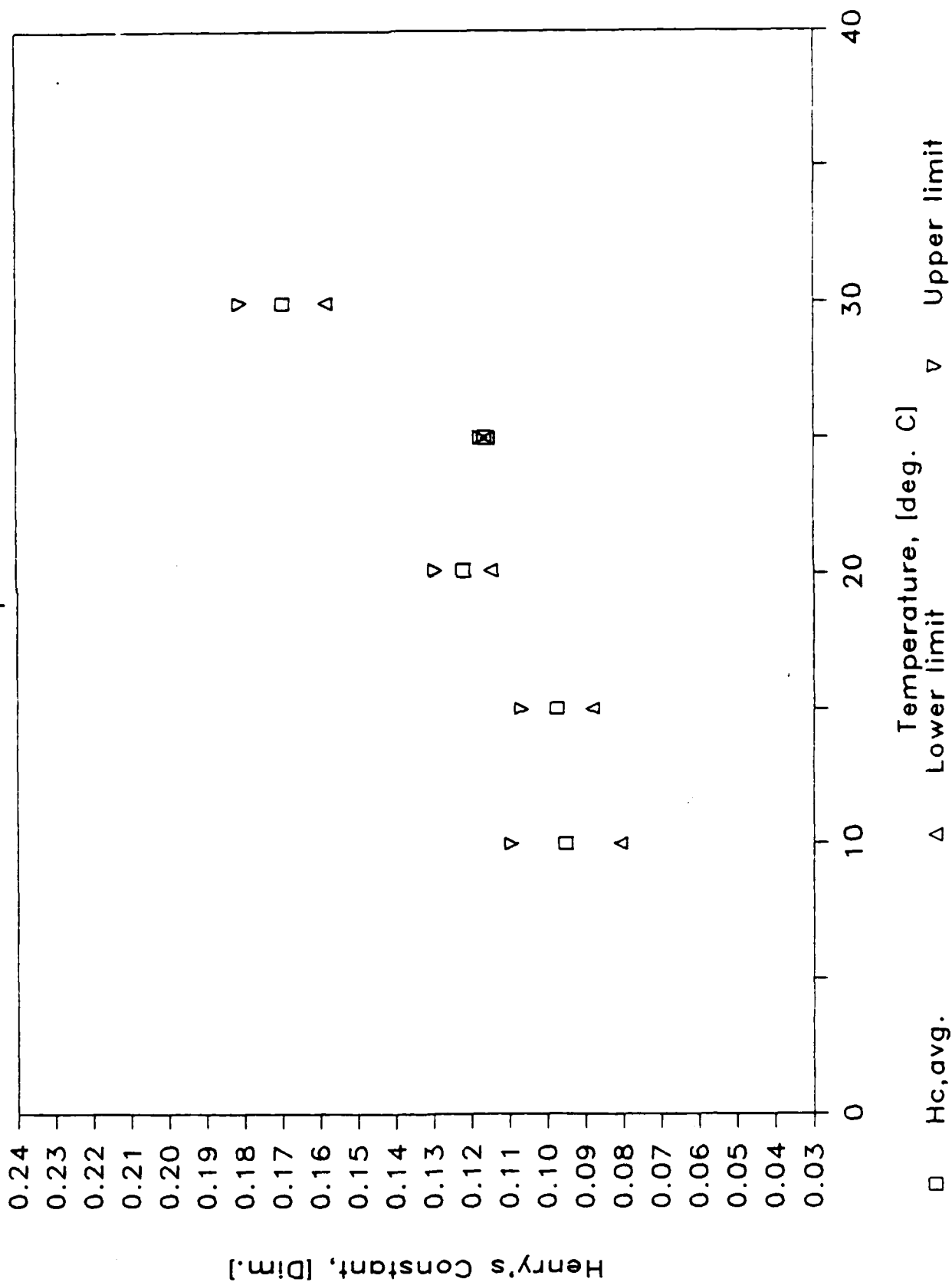Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9659

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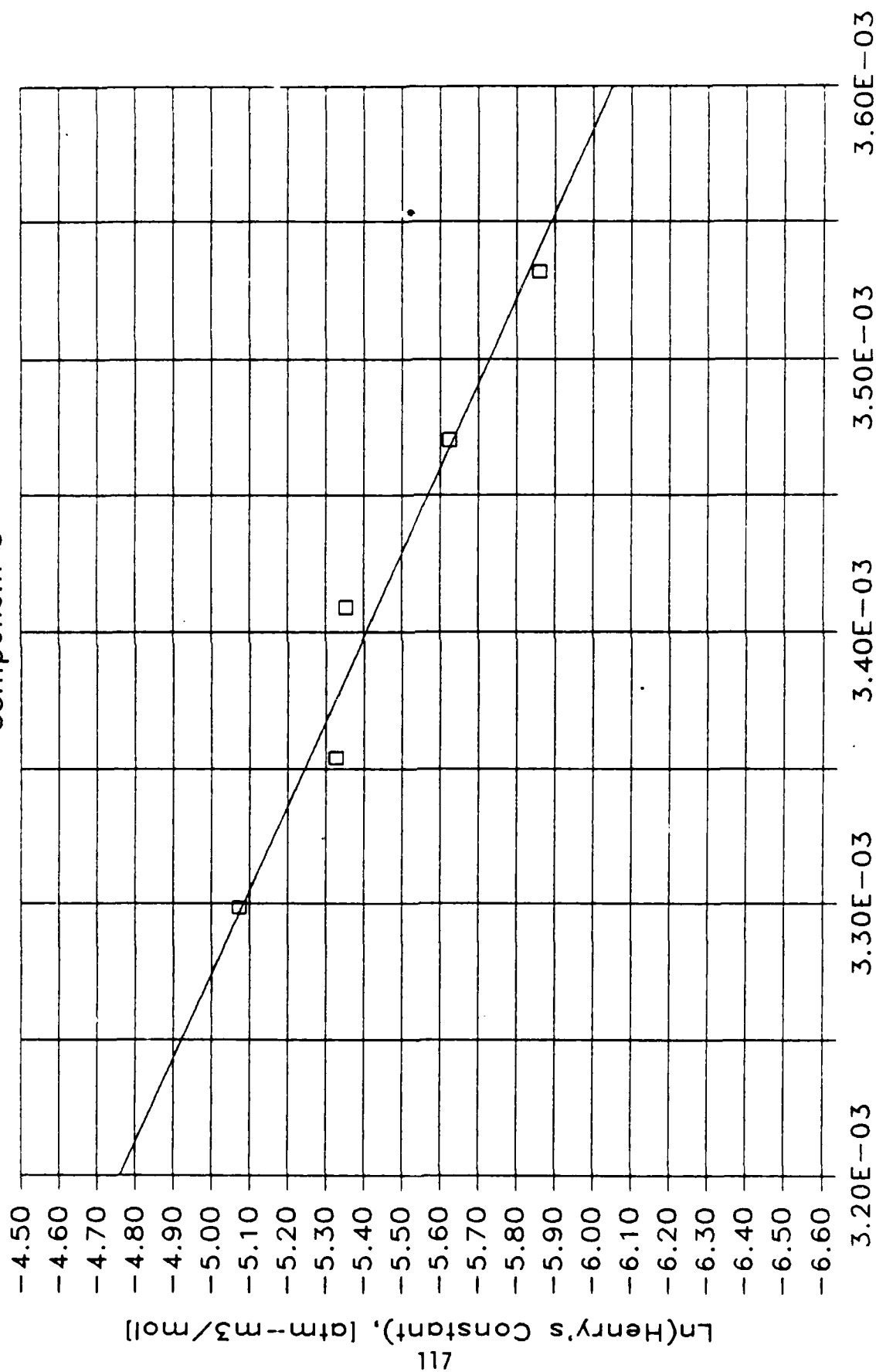
95% CONFIDENCE TEST

Component 9

REGRESSION CONFIDENCE TEST

Component 9, 95% Confidence
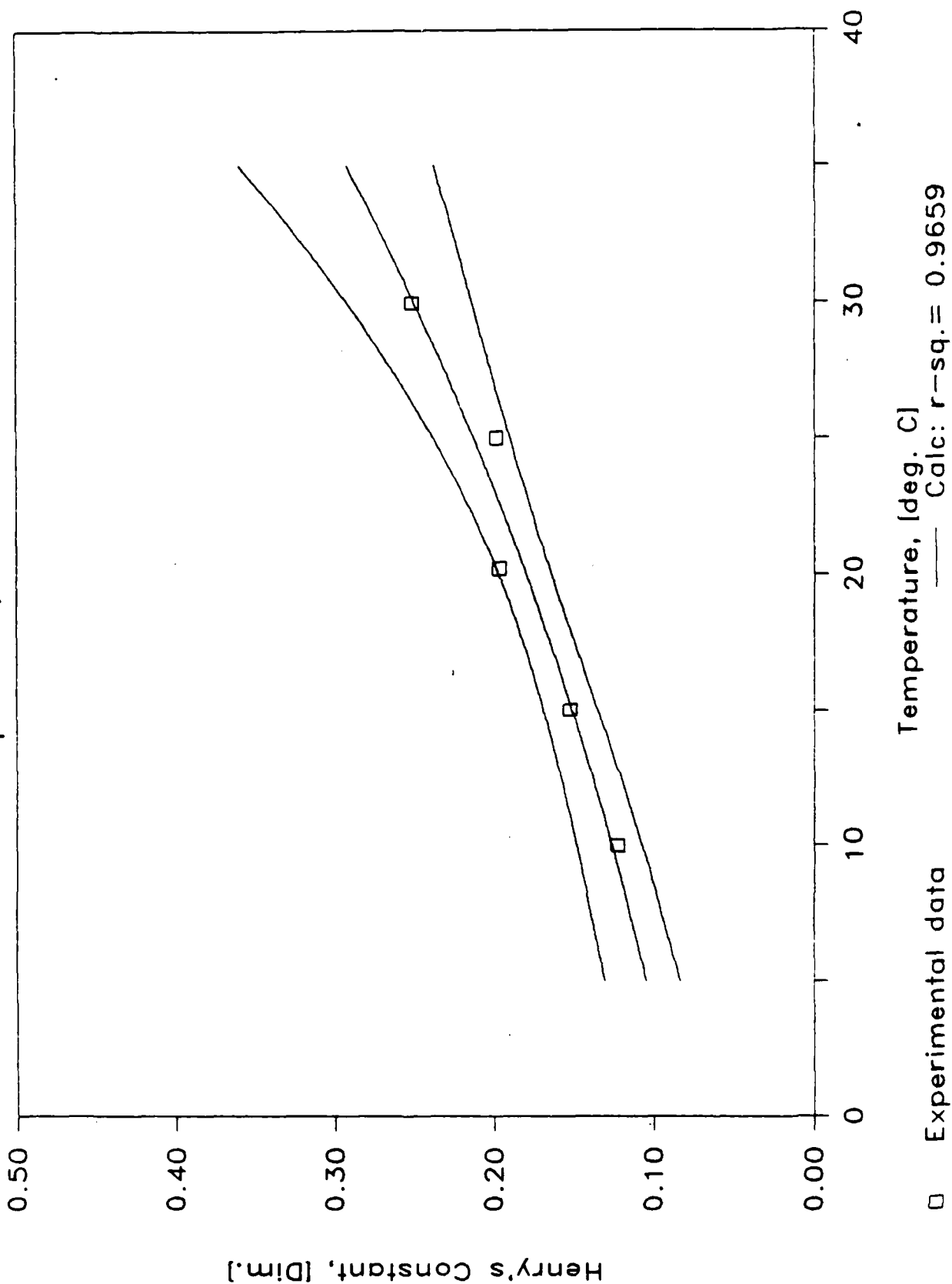
Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Experimental data
—— Calc: r-sq.= 0.9659

		Temperature 1			Temperature 2			Temperature 3		
RUN Number ----)		6			5			6		
REPLICATE ----)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		3			3			3		
Component ID		10			10			10		
Temperature (C)		10			15			20.2		
Low Vol (ml)		30			30			30		
High Vol (ml)		210			210			210		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.1809	1.0E-25		0.2044	1.0E-25		0.2680	1.0E-25	
H, avg: atm-mol/mol		233.3			268.2			358.1		
H, avg: atm-m3/mol		4.20E-03	1		4.83E-03	1		6.45E-03	1	
H, avg: kPa-m3/mol		0.4259			0.4897			0.6537		
COV, r [std/mean]		5.18			4.13			2.51		
COV, both replic.		———			———			———		
Observation: (1)		0.1839			0.2036			0.2624		
[atm-m3/m3] (2)		0.1920			0.2148			0.2741		
(3)		0.1699			0.1942			0.2620		
(4)		0.1777			0.2050			0.2736		
Injection: (1)		570570			718050			884190		
[Peak Area] (2)		547100			699270			883270		
(3)		1760100			2094200			2222300		
(4)		1719100			2031800			2163800		

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		Temperature 4			Temperature 5		
RUN Number —)		7			14		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2	
Group No.		3			3		
Component ID		10			10		
Temperature (C)		25			30		
Low Vol (ml)		30			30		
High Vol (ml)		210			210		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		0.3041	1.0E-25		0.3798	1.0E-25	
H, avg: atm-mol/mol		412.9			524.4		
H, avg: atm-m3/mol		7.44E-03	1		9.45E-03	1	
H, avg: kPa-m3/mol		0.7538			0.9572		
COV, r [std/mean]		1.90			2.14		
COV, both replic.		———			———		
Observation: (1)		0.2969			0.3821		
[atm-m3/m3] (2)		0.3089			0.3895		
(3)		0.2992			0.3702		
(4)		0.3093			0.3773		
Injection: (1)		1078900			1336700		
[Peak Area] (2)		1079800			1308600		
(3)		2501000			2639900		
(4)		2449200			2606600		

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.5E+03
Y-INTERCEPT	=	6.9E+00
R-SQUARED	=	0.9889

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TEMPERATURE REGRESSION PLOT

Component 10

Experimental data
Regr: r-sq.= 0.9889

Reciprocal Temperature, [1/K]

Ln(Henry's Constant), [atm-m3/mol]

95% CONFIDENCE TEST
Component 10

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc.avg. △ Lower limit ▽ Upper limit
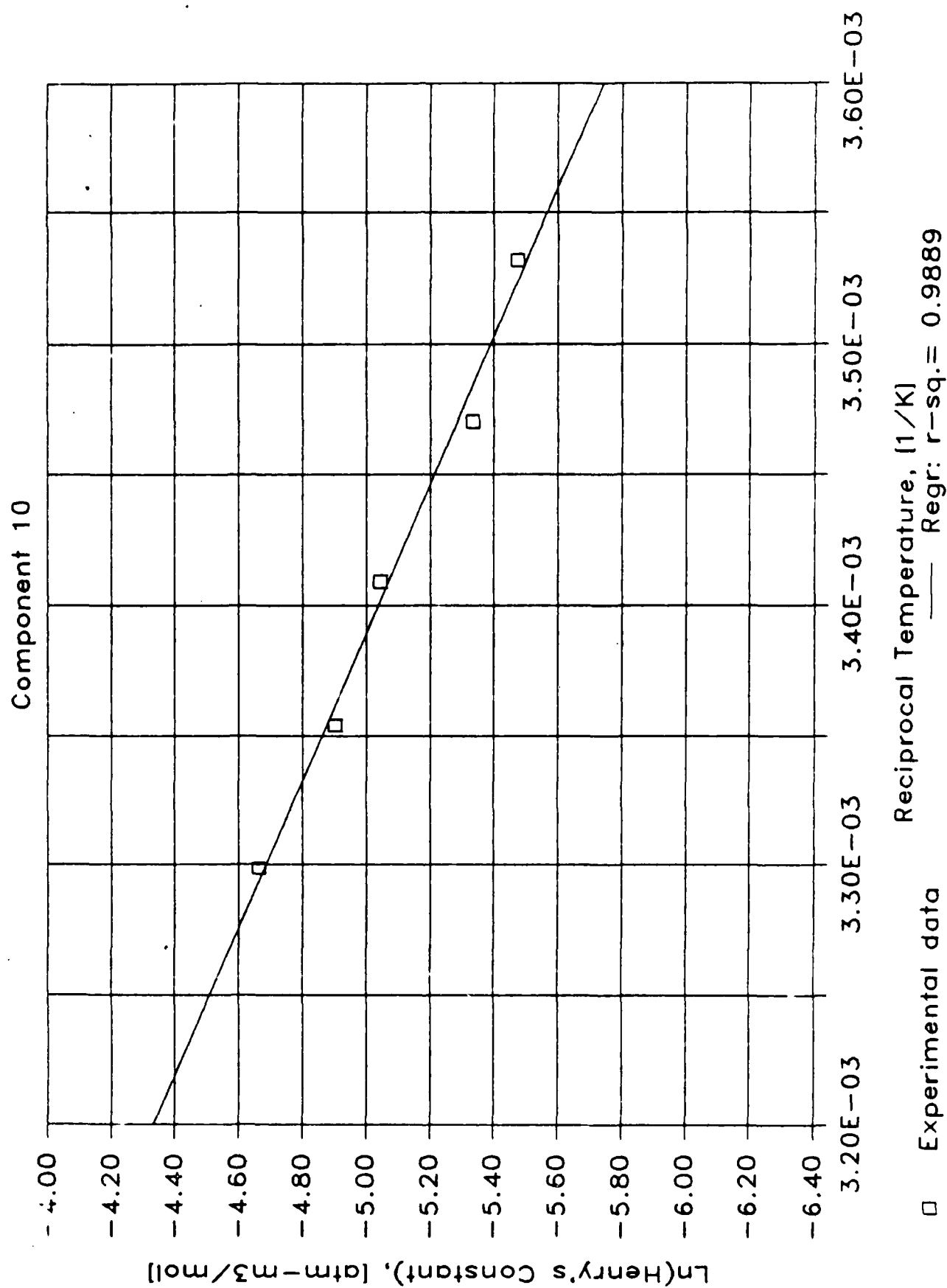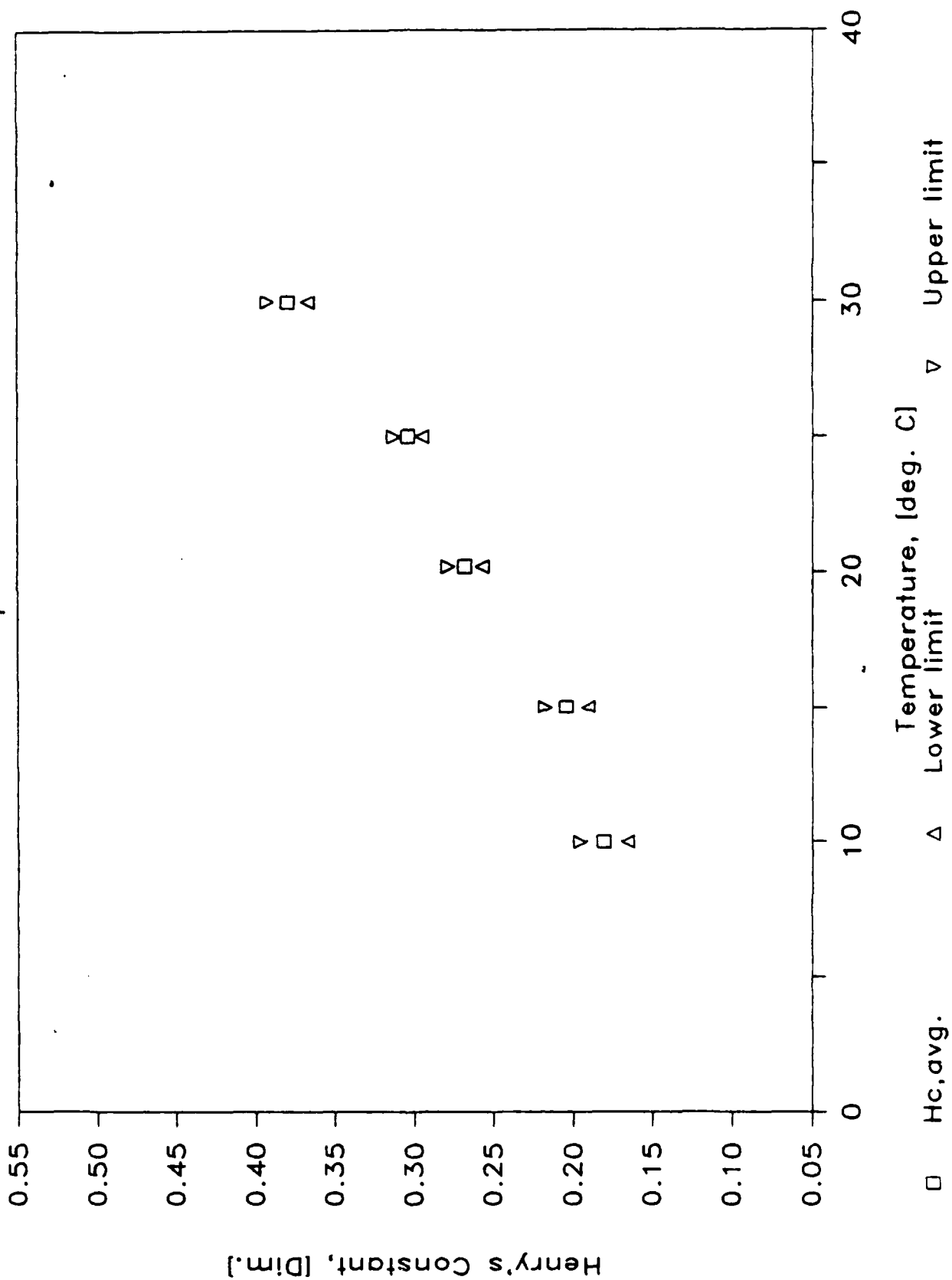
REGRESSION CONFIDENCE TEST

Component 10, 95% Confidence
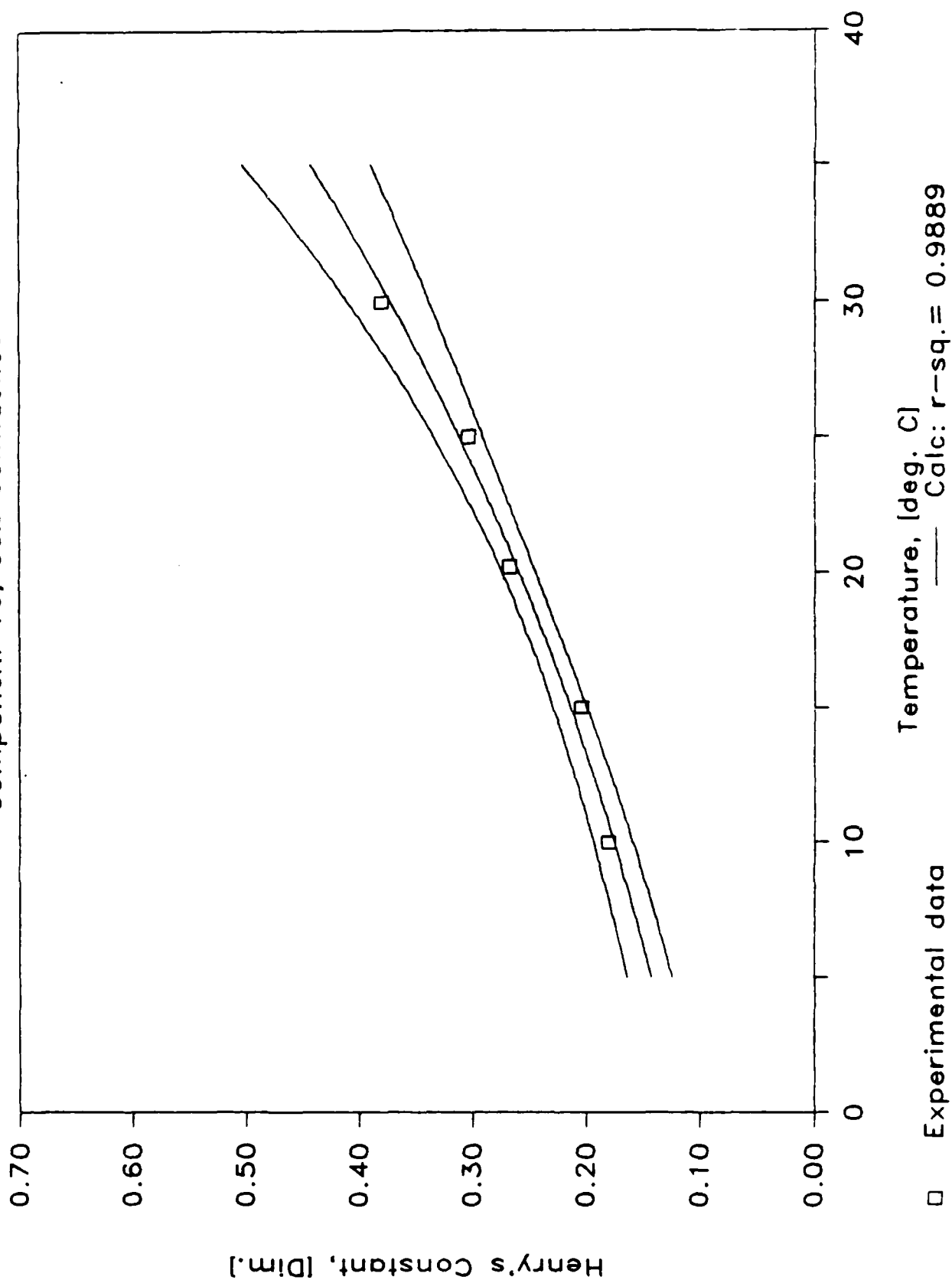
Temperature, [deg. C]

Henry's Constant, [Dim.]

Calc: r-sq.= 0.9889

□   Experimental data

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	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	10		9		10	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	3		3		3	
Component ID	11		11		11	
Temperature (C)	10		15		20.2	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.1768	1.0E-25	0.2099	1.0E-25	0.2483	1.0E-25
H, avg: atm-mol/mol	228.0		275.4		331.8	
H, avg: atm-m3/mol	4.11E-03	1	4.96E-03	1	5.98E-03	1
H, avg: kPa-m3/mol	0.4161		0.5028		0.6057	
COV, r [std/mean]	4.71		2.31		3.01	
COV, both replic.	------		------		------	
Observation: (1)	0.1839		0.2095		0.2464	
[atm-m3/m3] (2)	0.1841		0.2158		0.2573	
(3)	0.1694		0.2039		0.2394	
(4)	0.1696		0.2102		0.2501	
Injection: (1)	539200		671850		828900	
[Peak Area] (2)	516360		661730		814790	
(3)	1663800		1928200		2164100	
(4)	1662800		1895800		2108200	

		Temperature 4		Temperature 5	
RUN Number —)		11		17	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		3		3	
Component ID		11		11	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.3041	1.0E-25	0.3567	1.0E-25
H, avg: atm-mol/mol		413.0		492.5	
H, avg: atm-m3/mol		7.44E-03	1	8.87E-03	1
H, avg: kPa-m3/mol		0.7538		0.8991	
COV, r [std/mean]		4.67		2.50	
COV, both replic.		———		———	
Observation:	(1)	0.2956		0.3550	
[atm-m3/m3]	(2)	0.3194		0.3675	
	(3)	0.2890		0.3460	
	(4)	0.3124		0.3583	
Injection:	(1)	1030200		1201800	
[Peak Area]	(2)	1015600		1181700	
	(3)	2404700		2492700	
	(4)	2288900		2436000	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.3E+03
Y-INTERCEPT	=	6.3E+00
R-SQUARED	=	0.9978

TEMPERATURE REGRESSION PLOT

Component 11

Ln(Henry's Constant), [atm-m3/mol] vs Reciprocal Temperature, [1/K]
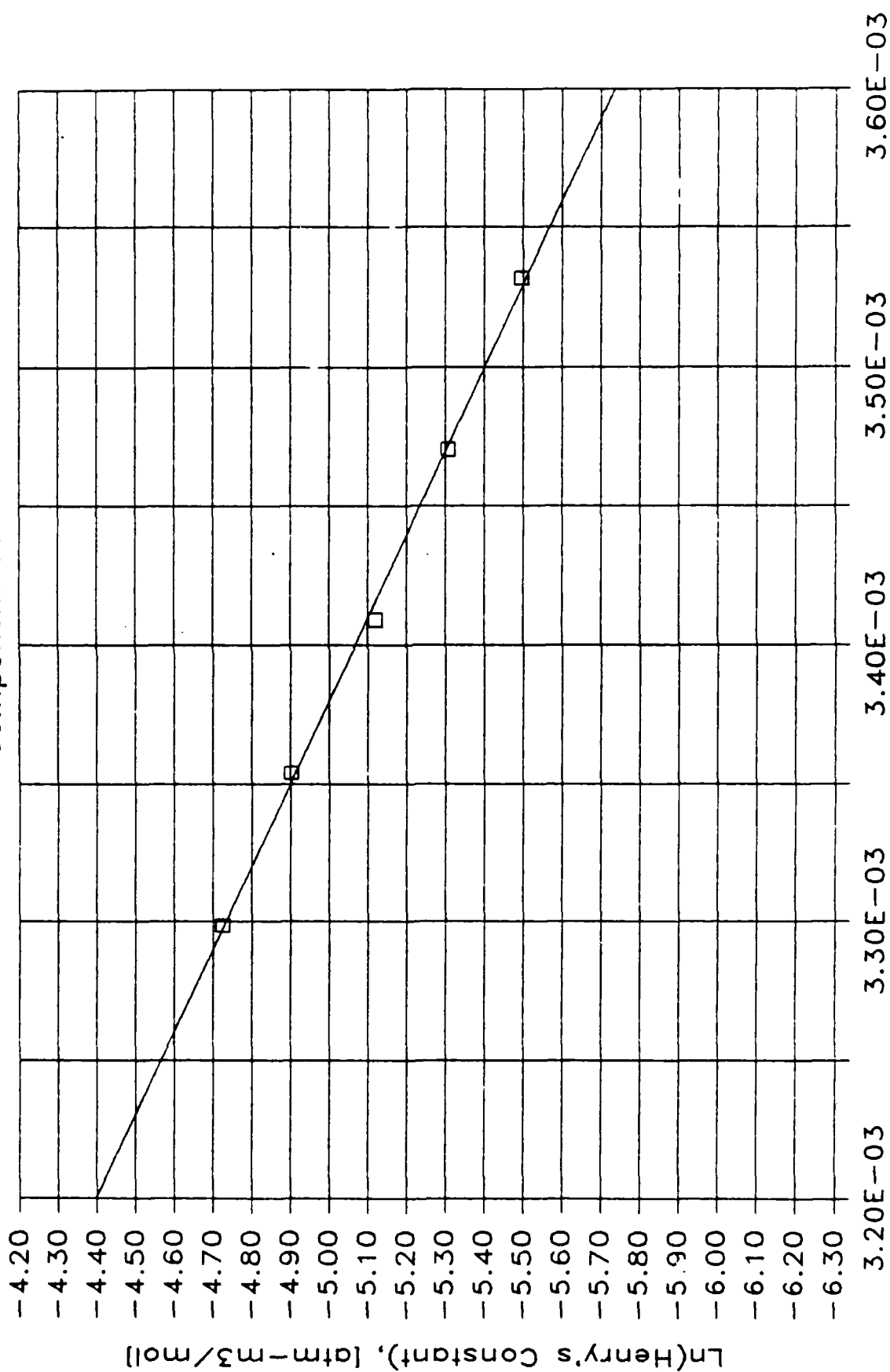
□ Experimental data

—— Regr: r-sq.= 0.9978

95% CONFIDENCE TEST
Component 11

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.　△ Lower limit　▽ Upper limit

REGRESSION CONFIDENCE TEST

Component 11, 95% Confidence
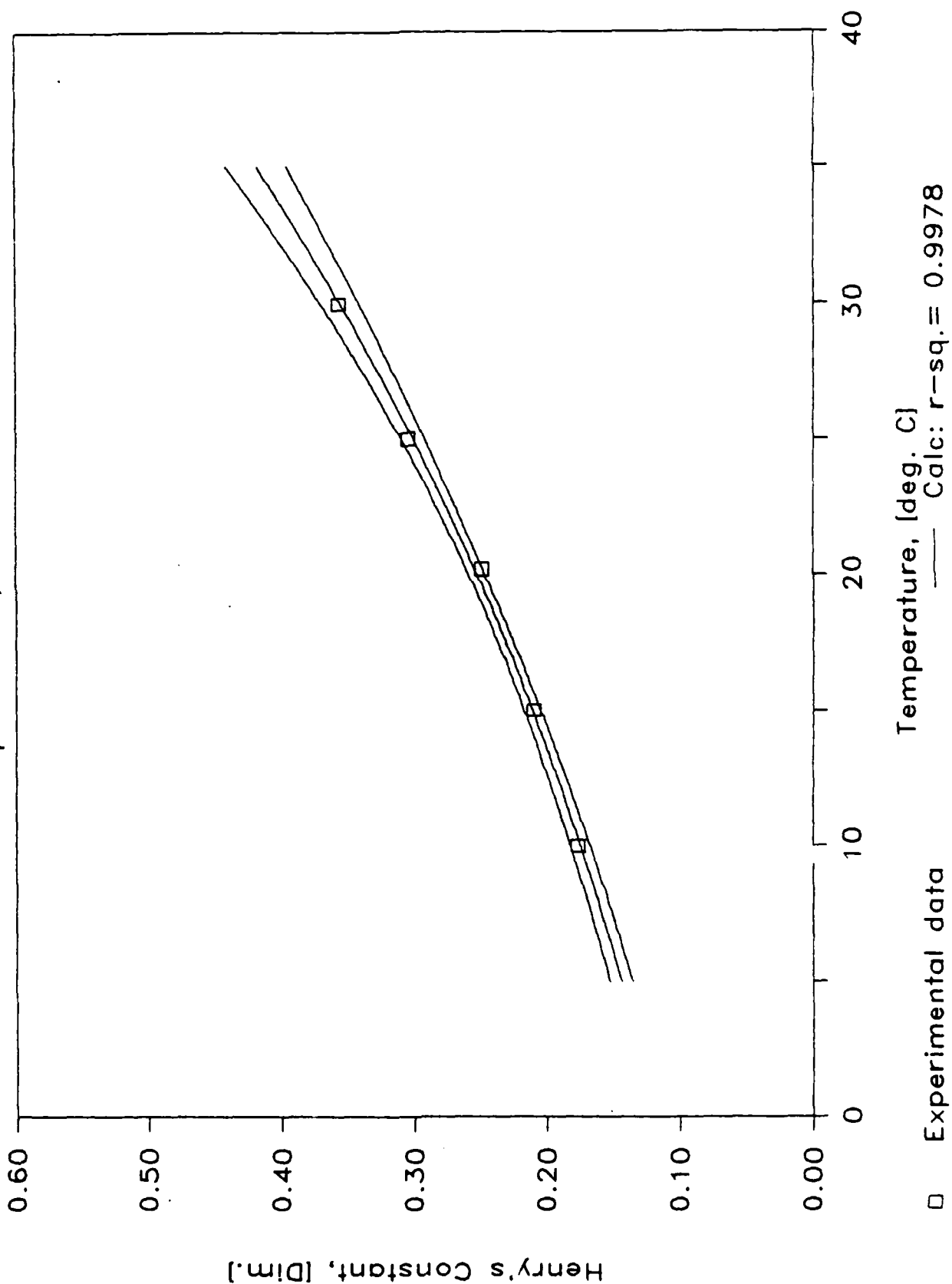
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
—— Calc: r-sq.= 0.9978

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —⟩	14		13		14	
REPLICATE —⟩	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	3		3		3	
Component ID	12		12		12	
Temperature (C)	10		15		20.2	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.2445	1.0E-25	0.3091	1.0E-25	0.3659	1.0E-25
H,avg: atm-mol/mol	315.3		405.7		489.0	
H,avg: atm-m3/mol	5.68E-03	1	7.31E-03	1	8.81E-03	1
H,avg: kPa-m3/mol	0.5756		0.7407		0.8926	
COV, r [std/mean]	3.45		4.82		1.24	
COV, both replic.	———		———		———	
Observation: (1)	0.2390		0.3102		0.3715	
[atm-m3/m3] (2)	0.2533		0.3275		0.3659	
(3)	0.2357		0.2911		0.3660	
(4)	0.2499		0.3076		0.3604	
Injection: (1)	236500		300360		362820	
[Peak Area] (2)	234600		288510		359210	
(3)	628850		679910		730160	
(4)	607340		656600		737630	

	Temperature 4		Temperature 5	
RUN Number ---)	15		20	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2
Group No.	3		3	
Component ID	12		12	
Temperature (C)	25		30	
Low Vol (ml)	30		30	
High Vol (ml)	210		210	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	0.4399	1.0E-25	0.5502	1.0E-25
H, avg: atm-mol/mol	597.4		759.7	
H, avg: atm-m3/mol	1.08E-02	1	1.37E-02	1
H, avg: kPa-m3/mol	1.0906		1.3868	
COV, r [std/mean]	2.62		1.38	
COV, both replic.	———		———	
Observation: (1)	0.4342		0.5584	
[atm-m3/m3] (2)	0.4529		0.5544	
(3)	0.4270		0.5459	
(4)	0.4455		0.5419	
Injection: (1)	462950		556820	
[Peak Area] (2)	457740		547960	
(3)	838600		846340	
(4)	814600		850720	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.7E+03
Y-INTERCEPT	=	7.8E+00
R-SQUARED	=	0.9968
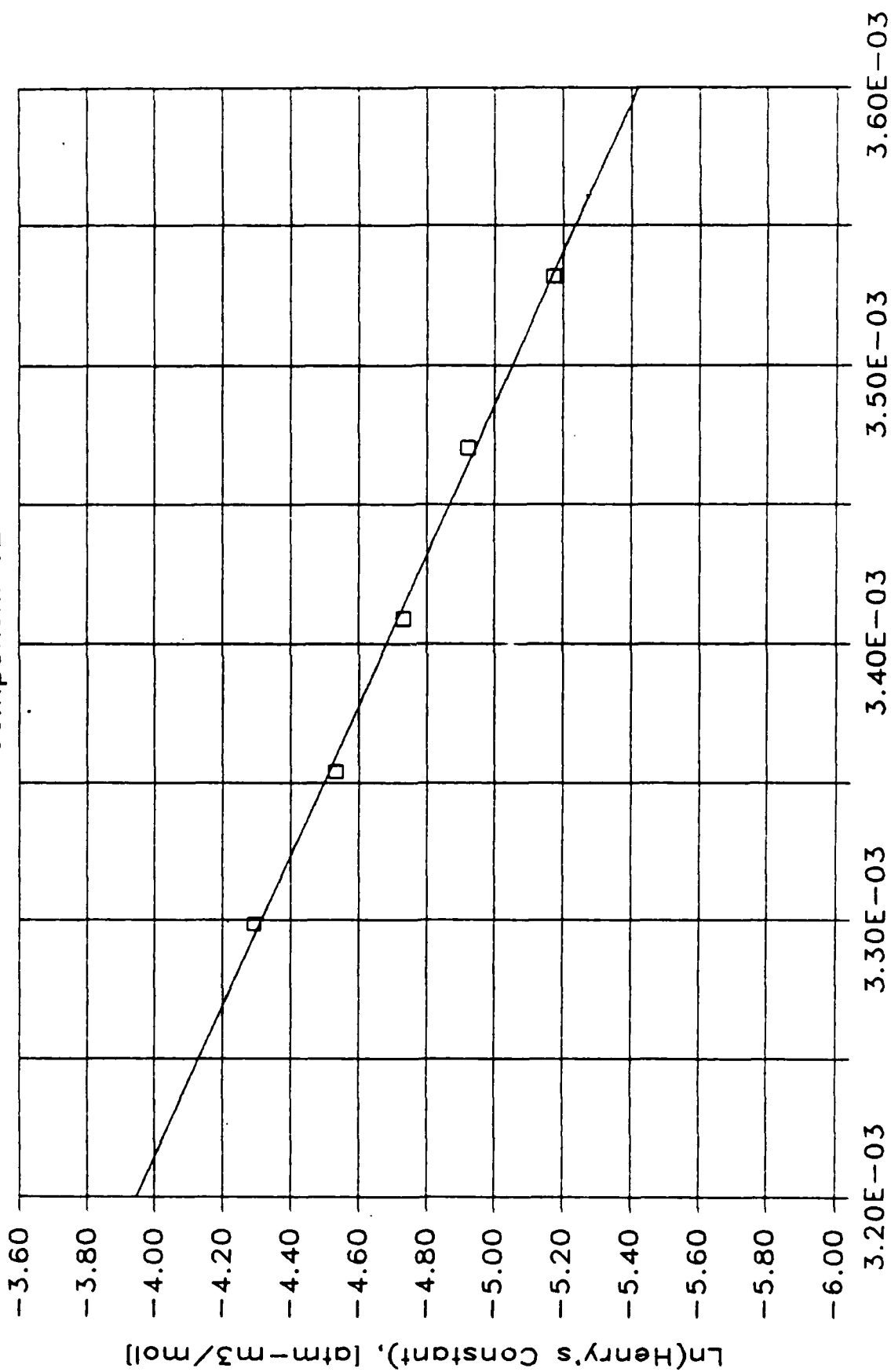
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TEMPERATURE REGRESSION PLOT
Component 12

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data
—— Regr: r-sq.= 0.9968

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95% CONFIDENCE TEST

Component 12

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

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REGRESSION CONFIDENCE TEST

Component 12, 95% Confidence
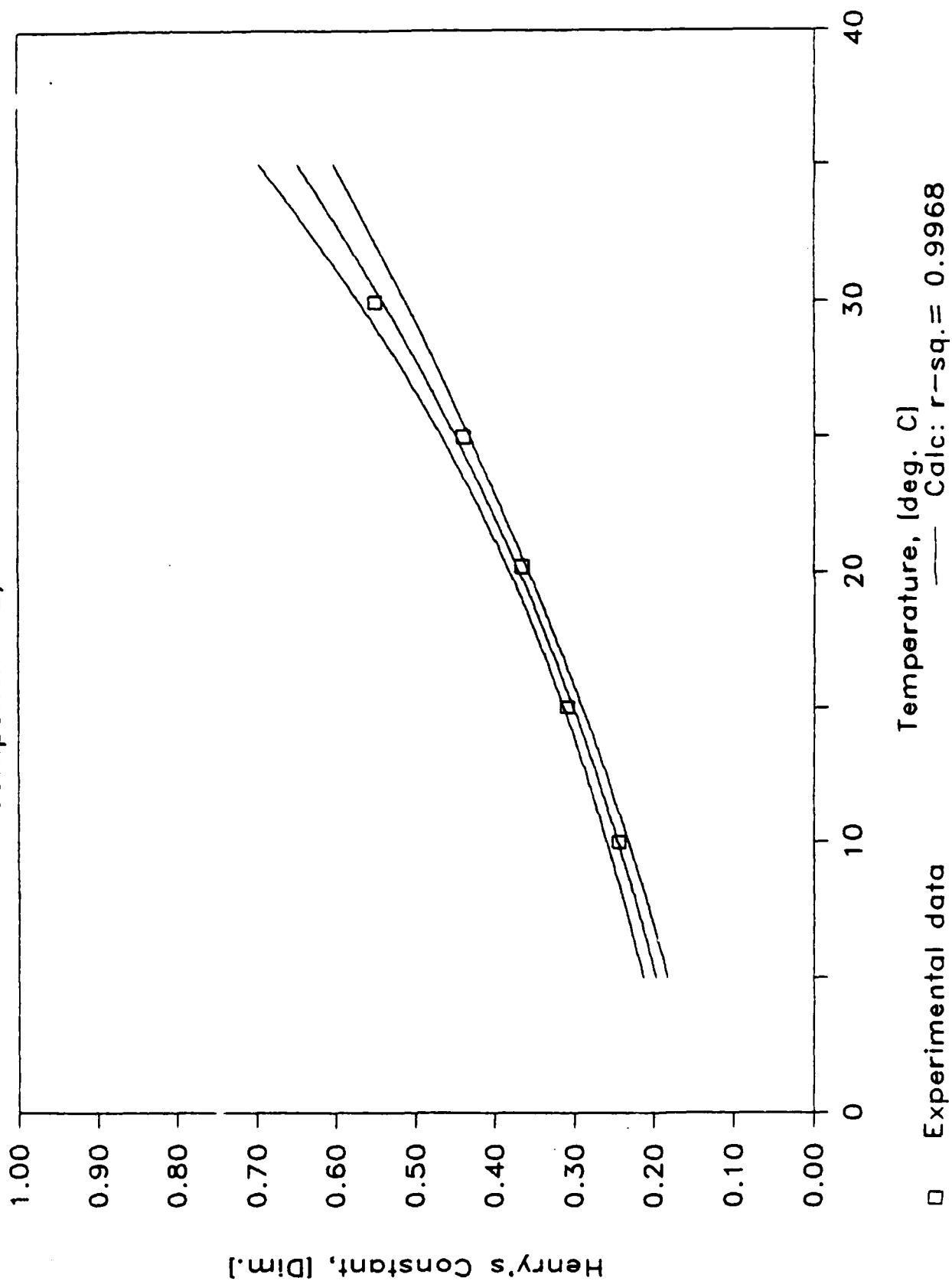
Temperature, [deg. C]

□ Experimental data
—— Calc: r-sq.= 0.9968

Henry's Constant, [Dim.]

		Temperature 1			Temperature 2			Temperature 3		
RUN Number —)		17			16			17		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		3			3			3		
Component ID		13			13			13		
Temperature (C)		10			15			20.2		
Low Vol (ml)		30			30			30		
High Vol (ml)		210			210			210		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.1982	1.0E-25		0.2764	1.0E-25		0.3054	1.0E-25	
H, avg: atm-mol/mol		245.3			362.7			408.0		
H, avg: atm-m3/mol		4.42E-03	1		6.54E-03	1		7.35E-03	1	
H, avg: kPa-m3/mol		0.4478			0.6622			0.7448		
COV, r [std/mean]		7.48			2.97			4.71		
COV, both replic.		——			——			——		
Observation: (1)		0.2006			0.2791			0.2884		
[atm-m3/m3] (2)		0.2042			0.2861			0.3009		
(3)		0.1764			0.2668			0.3094		
(4)		0.1796			0.2736			0.3226		
Injection: (1)		628740			769580			897750		
[Peak Area] (2)		586050			748450			938560		
(3)		1848900			1862200			2128100		
(4)		1830900			1833600			2071900		

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		Temperature 4		Temperature 5	
RUN Number —)		18		23	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		3		3	
Component ID		13		13	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.3237	1.0E-25	0.4136	1.0E-25
H, avg:atm-mol/mol		439.6		571.1	
H, avg: atm-m3/mol		7.92E-03	1	1.03E-02	1
H, avg: kPa-m3/mol		0.8024		1.0425	
COV, r [std/mean]		1.42		4.48	
COV, both replic.		——		——	
Observation:	(1)	0.3271		0.4184	
[atm-m3/m3]	(2)	0.3281		0.4359	
	(3)	0.3192		0.3917	
	(4)	0.3202		0.4083	
Injection:	(1)	1162700		1397200	
[Peak Area]	(2)	1144500		1336300	
	(3)	2543700		2595700	
	(4)	2538800		2524000	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.2E+03
Y-INTERCEPT	=	6.1E+00
R-SQUARED	=	0.9335

TEMPERATURE REGRESSION PLOT
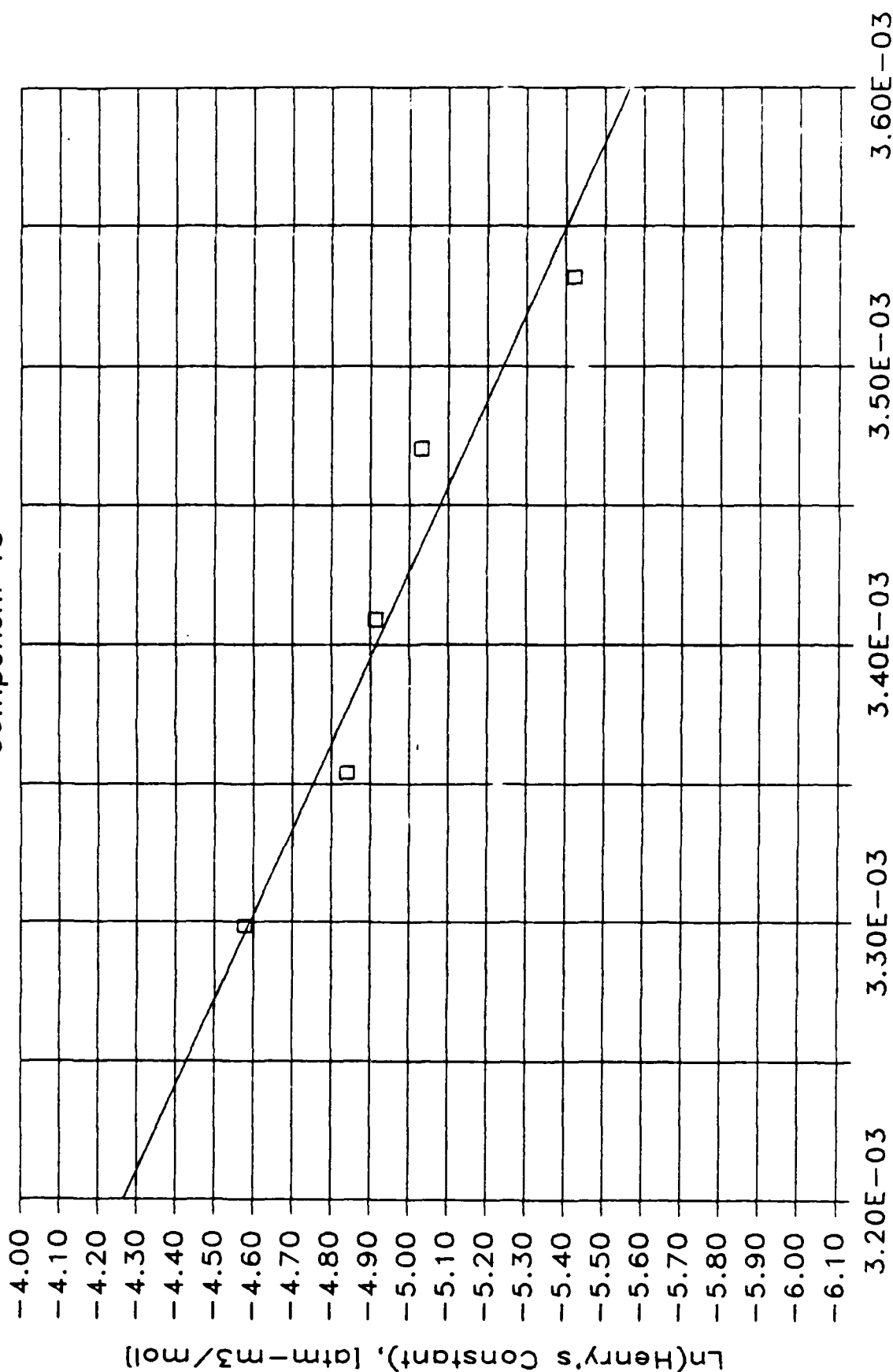
Component 13

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9335

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95% CONFIDENCE TEST
Component 13

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
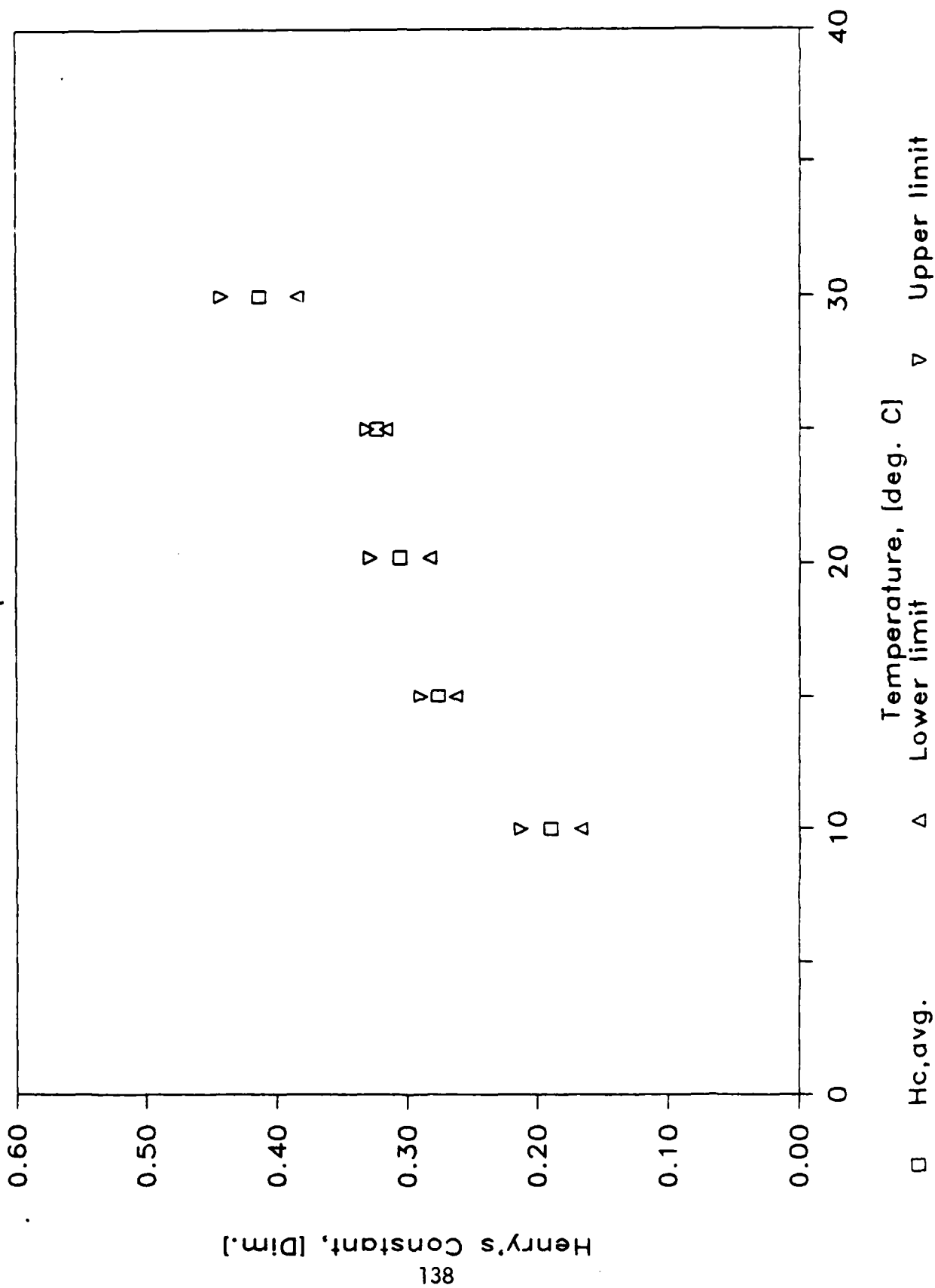
REGRESSION CONFIDENCE TEST

Component 13, 95% Confidence
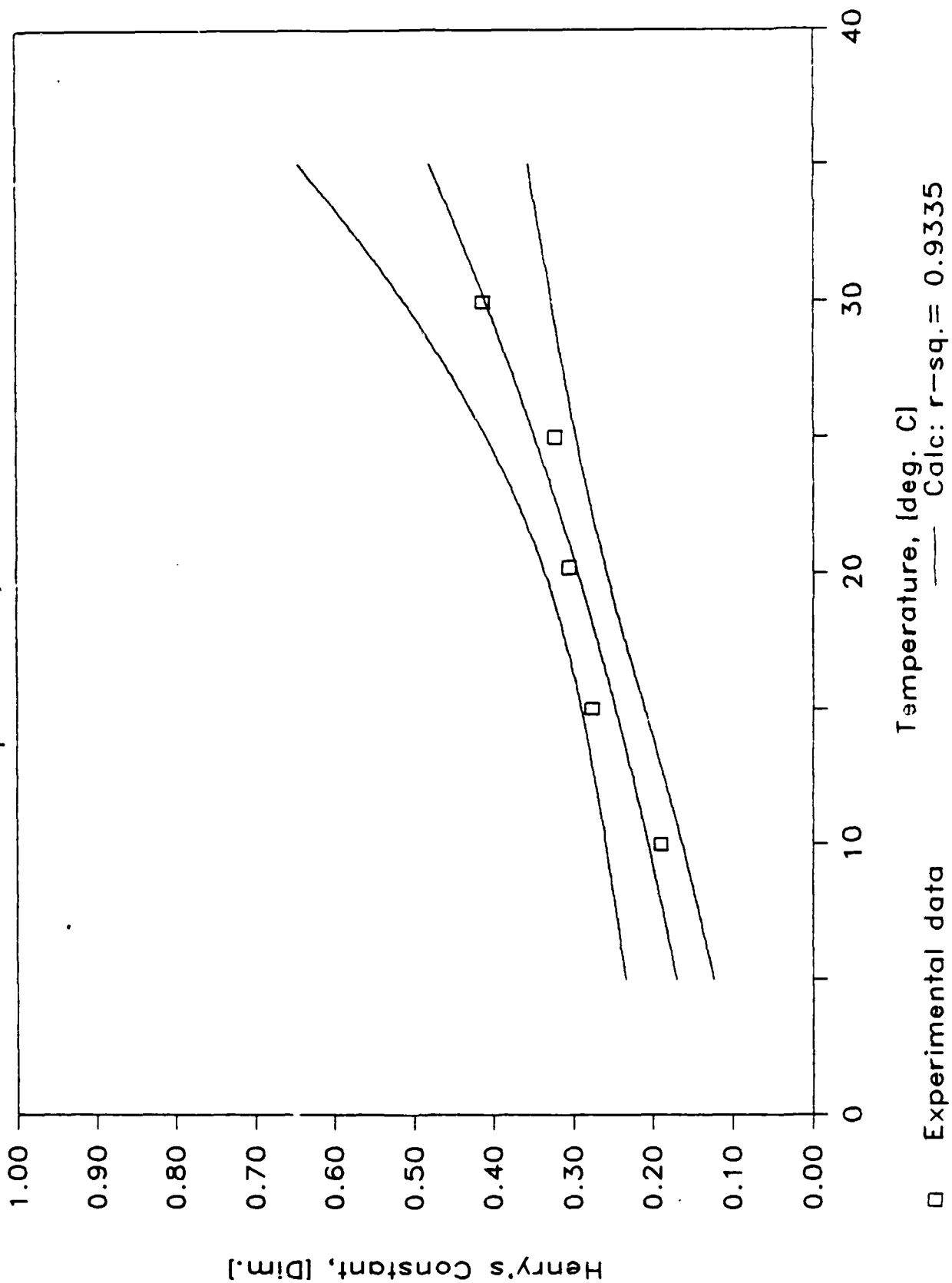
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

Calc: r-sq.= 0.9335

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)		50		69		2	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		15		15		15	
Component ID		113		113		113	
Temperature (C)		10		15.2		19.9	
Low Vol (ml)		30		30		30	
High Vol (ml)		210		210		210	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.1403	1.0E-25	0.1906	1.0E-25	0.2499	1.0E-25
H, avg: atm-mol/mol		180.9		250.3		333.5	
H, avg: atm-m3/mol		3.26E-03	1	4.51E-03	1	6.01E-03	1
H, avg: kPa-m3/mol		0.3303		0.4569		0.6088	
COV, r [std/mean]		0.63		5.64		3.46	
COV, both replic.		——		——		——	
Observation:	(1)	0.1403		0.1860		0.2534	
[atm-m3/m3]	(2)	0.1392		0.1783		0.2599	
	(3)	0.1414		0.2031		0.2400	
	(4)	0.1402		0.1949		0.2462	
Injection:	(1)	502780		692840		993870	
[Peak Area]	(2)	504550		727200		961960	
	(3)	1780800		2124200		2551400	
	(4)	1787700		2173100		2512900	

		Temperature 4		Temperature 5	
RUN Number ———)		70		52	
REPLICATE ———)		No. 1	No. 2	No. 1	No. 2
Group No.		15		15	
Component ID		113		113	
Temperature (C)		25.15		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.3220	1.0E-25	0.4237	1.0E-25
H, avg: atm-mol/mol		437.4		585.1	
H, avg: atm-m3/mol		7.88E-03	1	1.05E-02	1
H, avg: kPa-m3/mol		0.7986		1.0680	
COV, r [std/mean]		2.97		2.28	
COV, both replic.		————		————	
Observation:	(1)	0.3217		0.4188	
[atm-m3/m3]	(2)	0.3337		0.4346	
	(3)	0.3103		0.4129	
	(4)	0.3221		0.4285	
Injection:	(1)	1192500		1487300	
[Peak Area]	(2)	1165400		1473000	
	(3)	2637500		2761100	
	(4)	2575300		2692400	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = -5.0E+03$$

$$\text{Y-INTERCEPT} = 1.2E+01$$

$$\text{R-SQUARED} = 0.9994$$

TEMPERATURE REGRESSION PLOT

Component 113
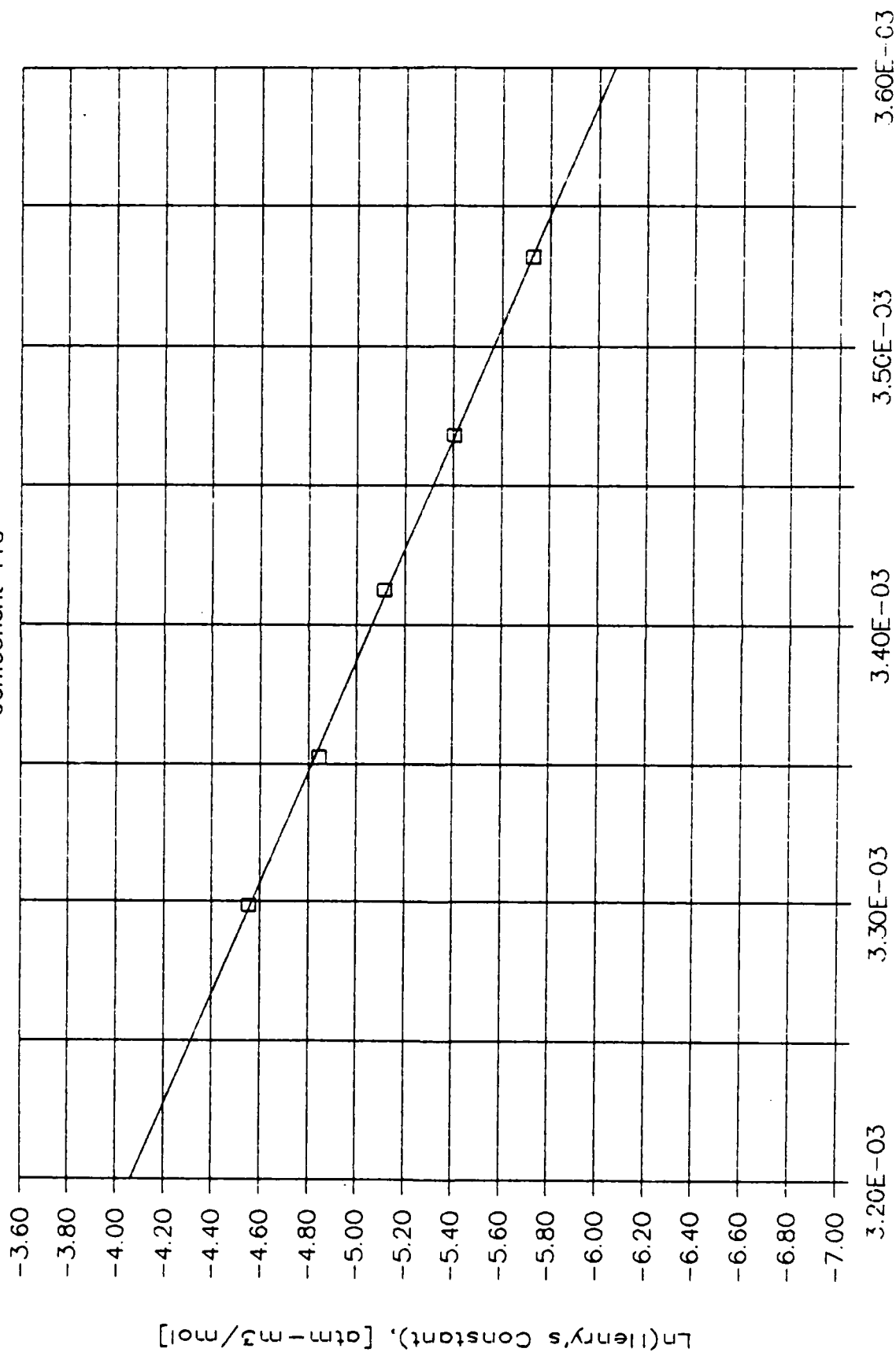
Ln(Henry's Constant), [atm−m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r−sq.= 0.9994

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95% CONFIDENCE TEST

Component 113

Henry's Constant, [Dim.]

Temperature, [deg. C]

△ Lower limit   □ Hc.avg.   ▷ Upper limit

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REGRESSION CONFIDENCE TEST

Component 113, 95% Confidence
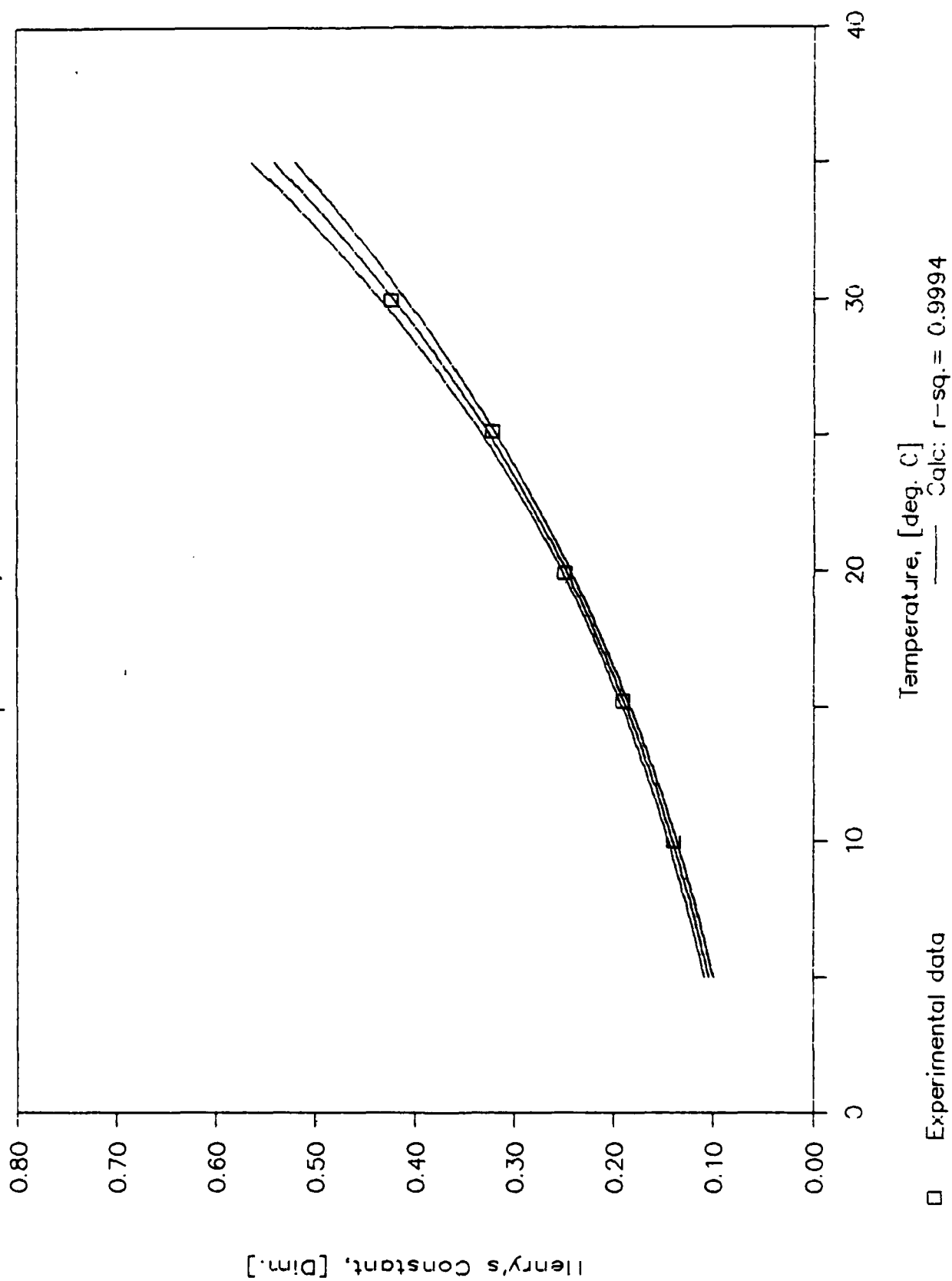
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.9994

□   Experimental data

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	2		2		3	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	4		4		4	
Component ID	14		14		14	
Temperature (C)	10		14.9		20.1	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.1641	1.0E-25	0.2083	1.0E-25	0.2305	1.0E-25
H, avg: atm-mol/mol	211.6		273.2		307.9	
H, avg: atm-m3/mol	3.81E-03	1	4.92E-03	1	5.55E-03	1
H, avg: kPa-m3/mol	0.3863		0.4988		0.5621	
COV, r [std/mean]	5.25		7.83		2.61	
COV, both replic.	———		———		———	
Observation: (1)	0.1626		0.2285		0.2276	
[atm-m3/m3] (2)	0.1746		0.2094		0.2374	
(3)	0.1537		0.2064		0.2238	
(4)	0.1654		0.1887		0.2334	
Injection: (1)	842030		1205500		1387400	
[Peak Area] (2)	816370		1132300		1372600	
(3)	2903400		3396300		3918000	
(4)	2787700		3583900		3816500	

		Temperature 4			Temperature 5	
RUN Number —)		3			3	
REPLICATE —)		No. 1	No. 2		No. 1	No. 2
Group No.		4			4	
Component ID		14			14	
Temperature (C)		25			30	
Low Vol (ml)		25			25	
High Vol (ml)		205			205	
System Vol (ml)		250			250	
H, avg: atm-m3/m3		0.2623	1.0E-25		0.3246	1.0E-25
H, avg: atm-mol/mol		356.2			448.3	
H, avg: atm-m3/mol		6.42E-03	1		8.06E-03	1
H, avg: kPa-m3/mol		0.6503			0.8183	
COV, r [std/mean]		0.60			1.34	
COV, both replic.		——			——	
Observation:	(1)	0.2605			0.3261	
[atm-m3/m3]	(2)	0.2630			0.3298	
	(3)	0.2616			0.3195	
	(4)	0.2641			0.3232	
Injection:	(1)	1464900			2072500	
[Peak Area]	(2)	1468800			2044100	
	(3)	3796800			4628100	
	(4)	3773200			4592800	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -3.0E+03

Y-INTERCEPT   =   5.1E+00
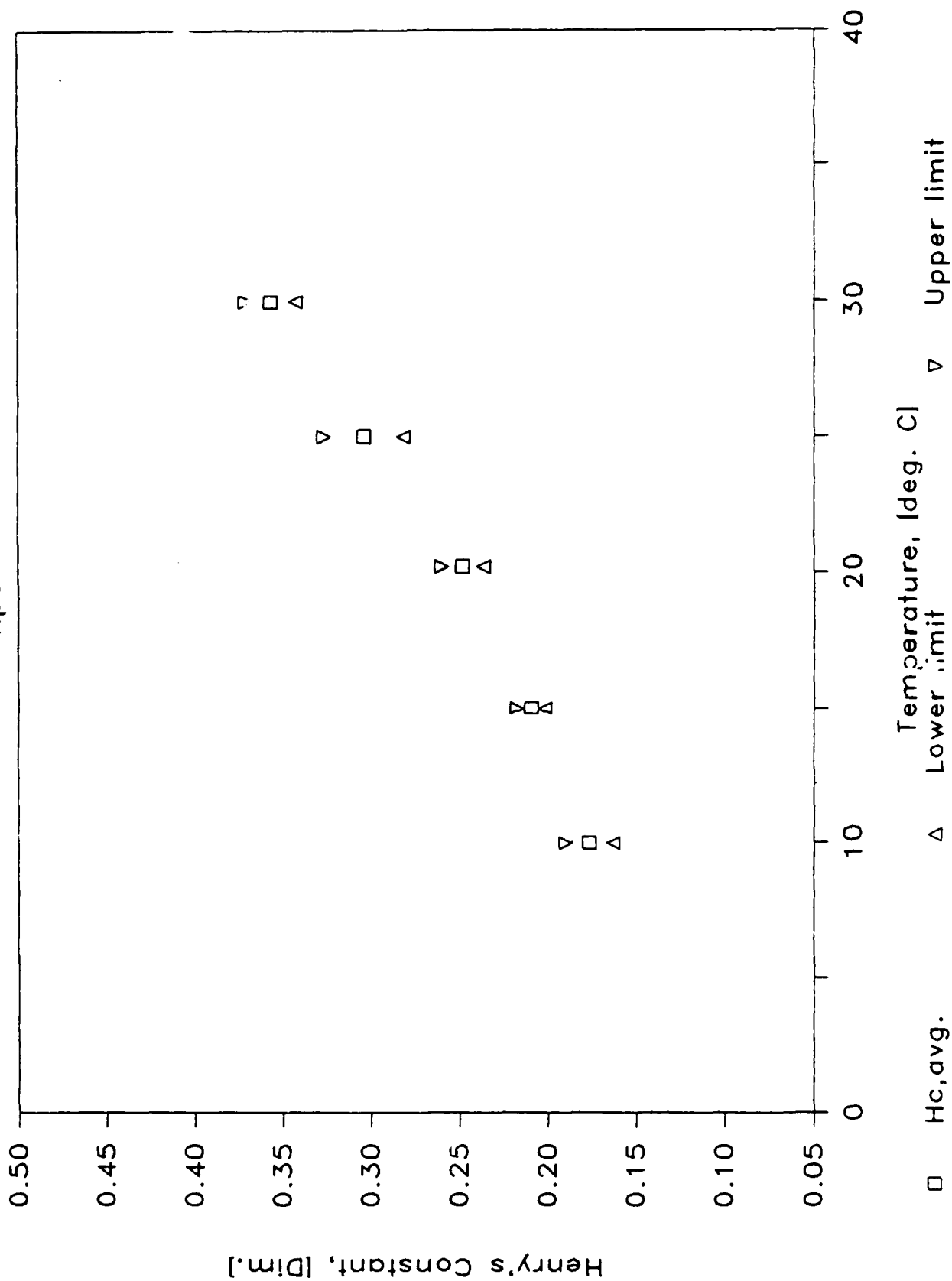
R-SQUARED   =   0.9828

TEMPERATURE REGRESSION PLOT

Component 14

Ln(Henry's Constant), [atm−m3/mol]

Reciprocal Temperature, [1/K]
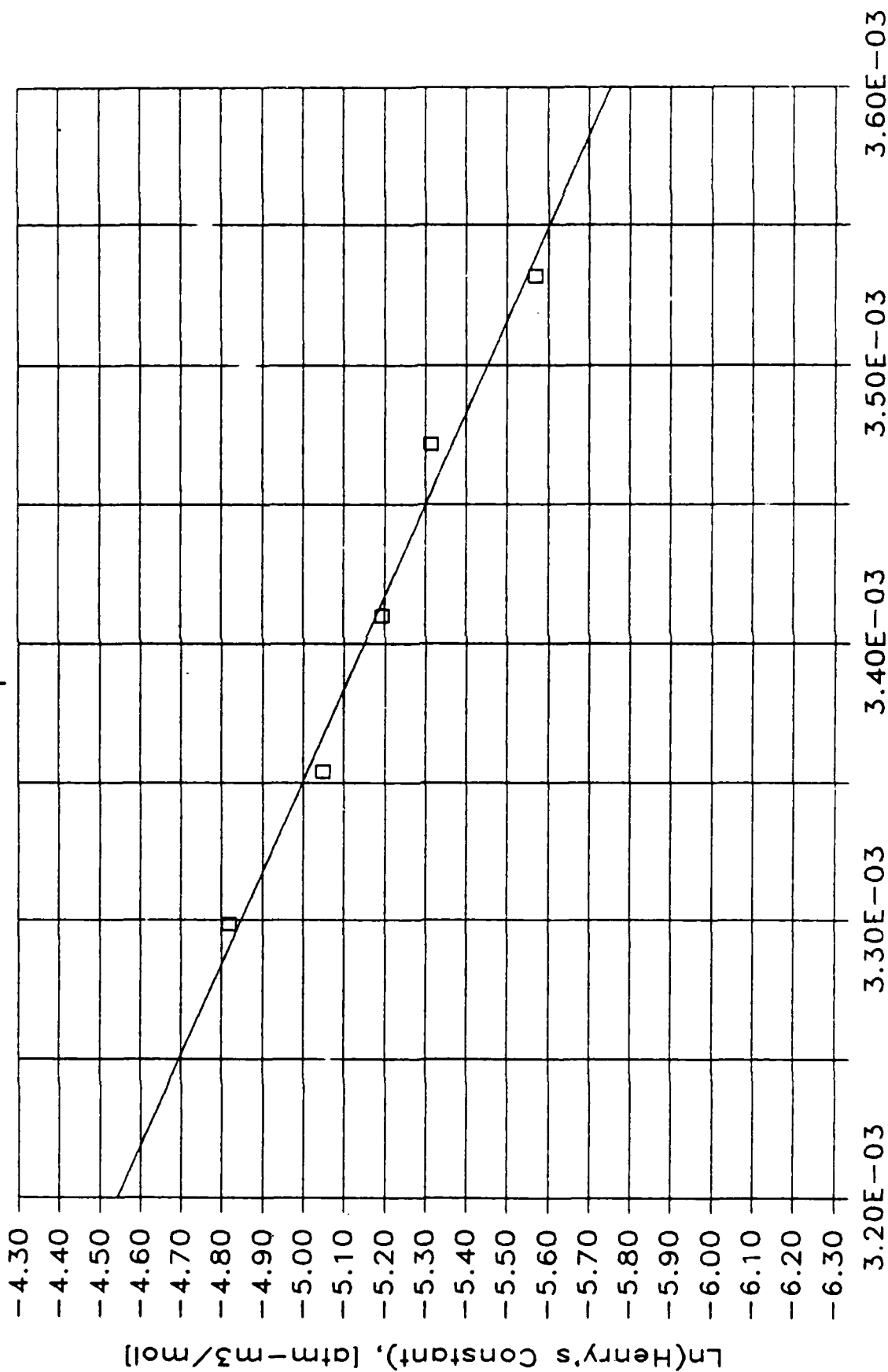
□ Experimental data

—— Regr: r−sq.= 0.9828

95% CONFIDENCE TEST

Component 14

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

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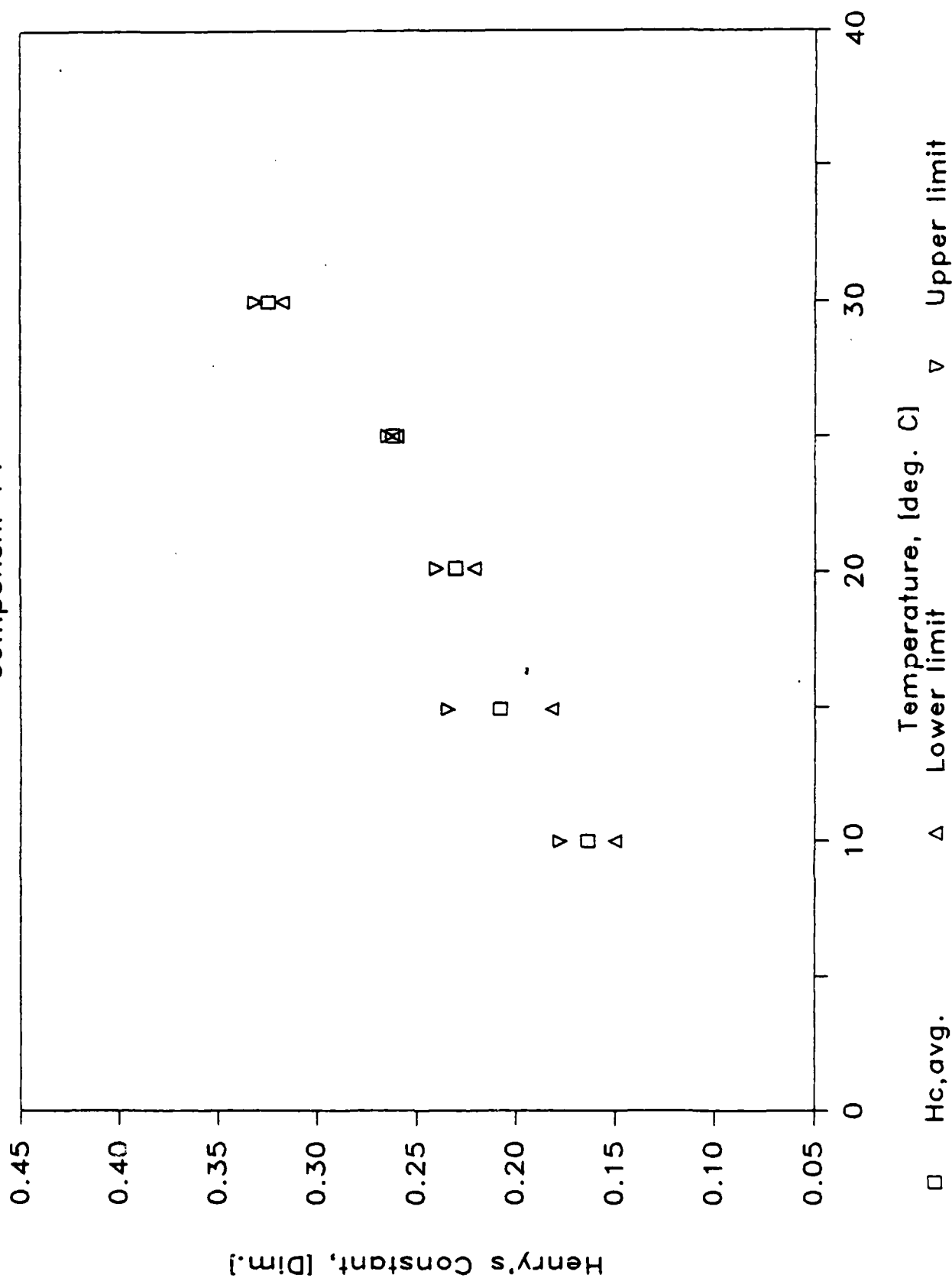
REGRESSION CONFIDENCE TEST

Component 14, 95% Confidence
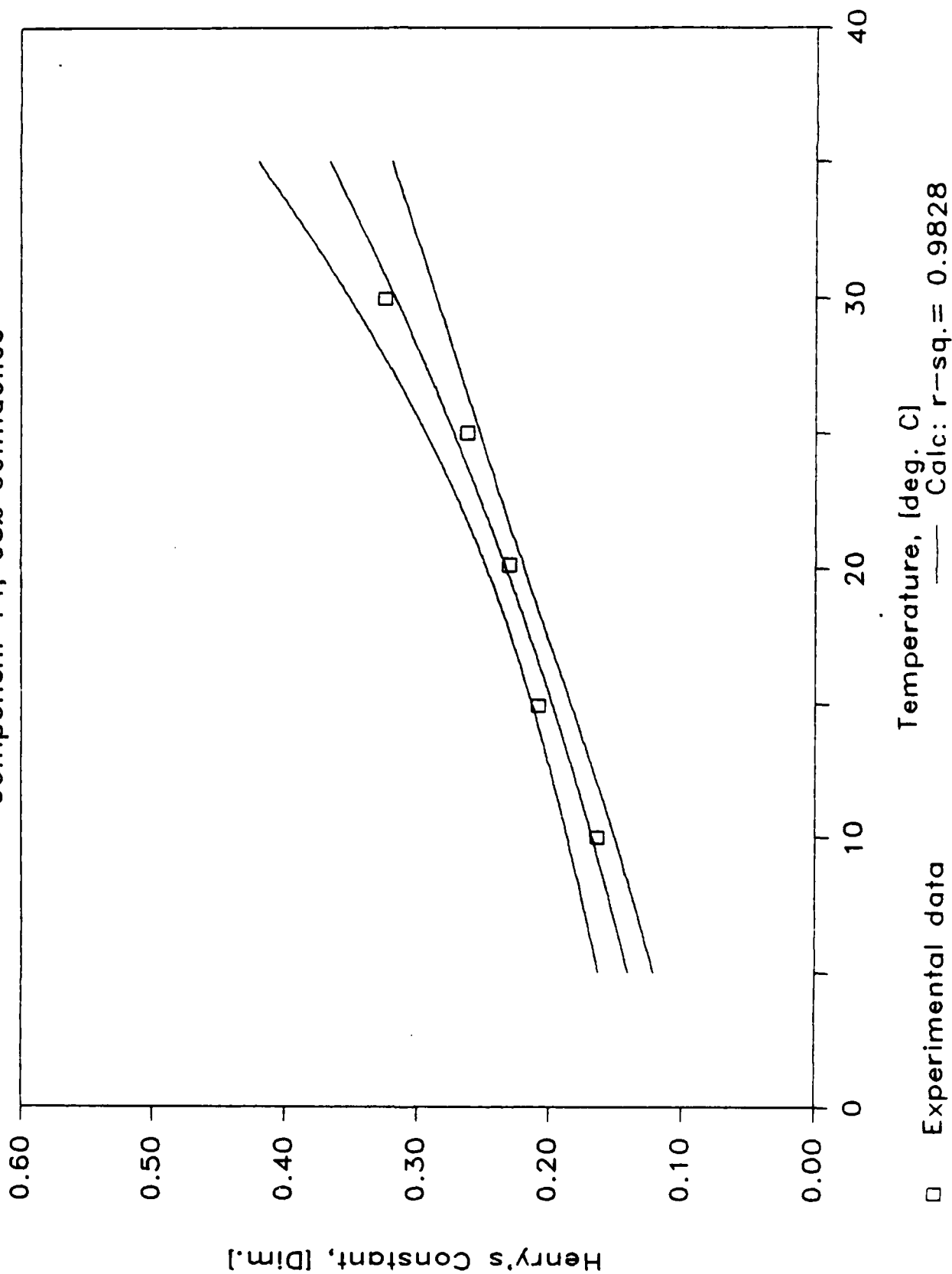
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.9828

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ⟶)	2		2		3	
REPLICATE ⟶)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	9		9		9	
Component ID	15		15		15	
Temperature (C)	10		15		20	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.1421	1.0E-25	0.1643	1.0E-25	0.1879	1.0E-25
H, avg: atm-mol/mol	183.2		215.6		250.8	
H, avg: atm-m3/mol	3.30E-03	1	3.88E-03	1	4.52E-03	1
H, avg: kPa-m3/mol	0.3345		0.3936		0.4579	
COV, r [std/mean]	1.50		6.35		4.83	
COV, both replic.	——		——		——	
Observation: (1)	0.1397		0.1518		0.1933	
[atm-m3/m3] (2)	0.1431		0.1626		0.1976	
·(3)	0.1410		0.1657		0.1783	
(4)	0.1445		0.1771		0.1823	
Injection: (1)	423440		552750		670650	
[Peak Area] (2)	425750		582370		637720	
(3)	1661000		2066400		2163500	
(4)	1638000		1983500		2133500	

		Temperature 4		Temperature 5	
RUN Number ---->		3		3	
REPLICATE ---->		No. 1	No. 2	No. 1	No. 2
Group No.		9		9	
Component ID		15		15	
Temperature (C)		25		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.2156	1.0E-25	0.2895	1.0E-25
H, avg: atm-mol/mol		292.8		399.7	
H, avg: atm-m3/mol		5.28E-03	1	7.20E-03	1
H, avg: kPa-m3/mol		0.5345		0.7297	
COV, r [std/mean]		4.72		5.24	
COV, both replic.		----		----	
Observation:	(1)	0.2229		0.2965	
[atm-m3/m3]	(2)	0.2258		0.3067	
	(3)	0.2056		0.2726	
	(4)	0.2083		0.2821	
Injection:	(1)	704830		984040	
[Peak Area]	(2)	668700		928310	
	(3)	2073300		2385500	
	(4)	2056000		2329800	

Temperature Regression Parameters:

OF POINTS =   5

SLOPE = -3.2E+03

Y-INTERCEPT = 5.5E+00
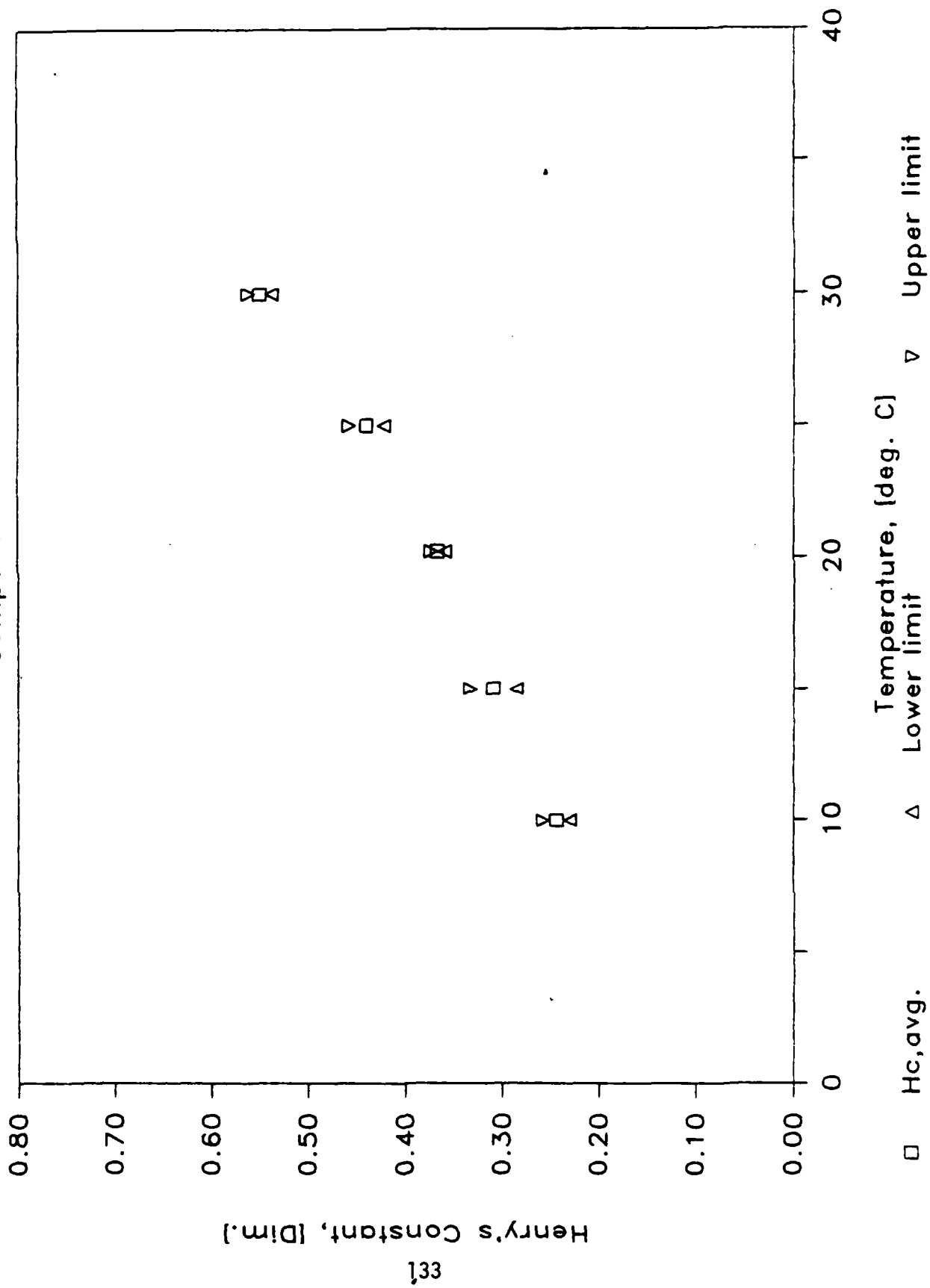
R-SQUARED = 0.9677

TEMPERATURE REGRESSION PLOT
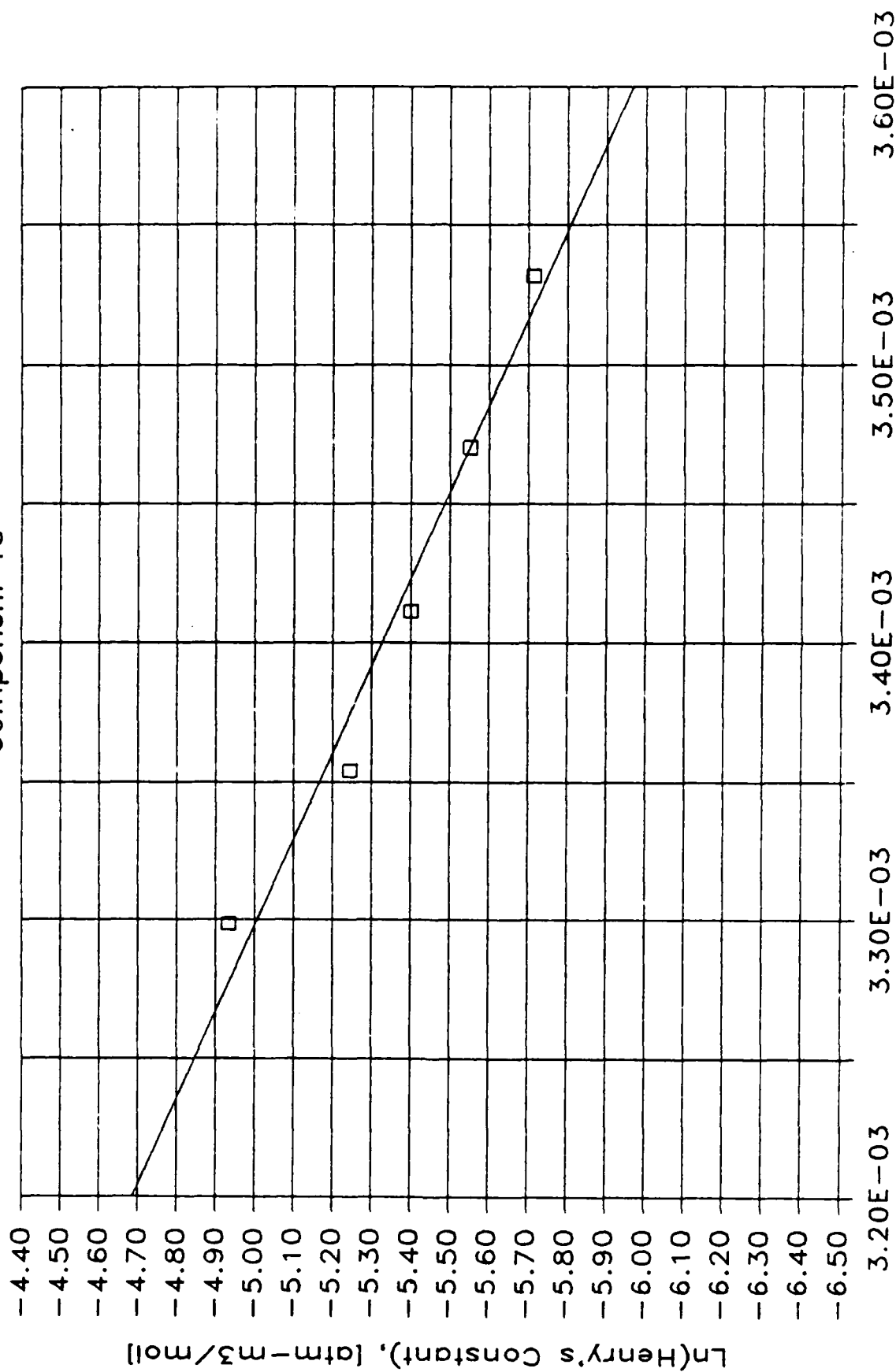
Component 15

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9677

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95% CONFIDENCE TEST

Component 15

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

153
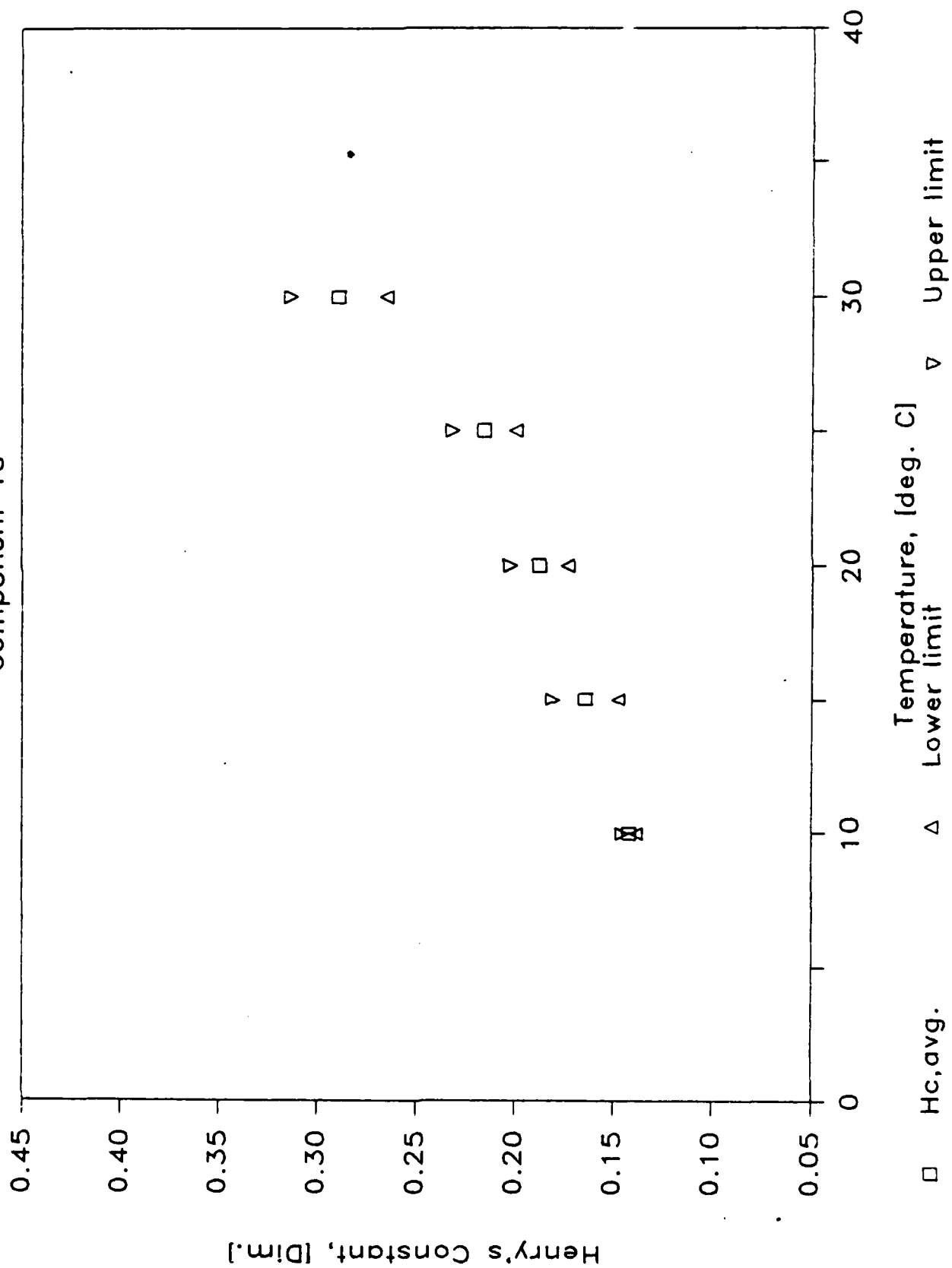
REGRESSION CONFIDENCE TEST

Component 15, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.9677

□   Experimental data

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	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	11		10		11	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	4		4		4	
Component ID	16		16		16	
Temperature (C)	10		14.9		20.1	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.2573	1.0E-25	0.3454	1.0E-25	0.4072	1.0E-25
H, avg:atm-mol/mol	331.8		453.1		543.8	
H, avg: atm-m3/mol	5.98E-03	1	8.16E-03	1	9.80E-03	1
H, avg: kPa-m3/mol	0.6058		0.8272		0.9928	
COV, r [std/mean]	6.02		9.57		53.81	
COV, both replic.	------		------		------	
Observation: (1)	0.2758		0.3132		0.2333	
[atm-m3/m3] (2)	0.2623		0.3209		0.2049	
(3)	0.2519		0.3693		0.6279	
(4)	0.2393		0.3781		0.5625	
Injection: (1)	3400		4877		4370	
[Peak Area] (2)	3206		5459		8664	
(3)	8492		11192		12154	
(4)	8774		11011		13165	

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	Temperature 4		Temperature 5	
RUN Number —)	12		11	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2
Group No.	4		4	
Component ID	16		16	
Temperature (C)	25		30	
Low Vol (ml)	25		25	
High Vol (ml)	205		205	
System Vol (ml)	250		250	
H,avg: atm-m3/m3	0.5257	1.0E-25	0.7479	1.0E-25
H,avg:atm-mol/mol	713.9		1032.7	
H,avg: atm-m3/mol	1.29E-02	1	1.86E-02	1
H,avg: kPa-m3/mol	1.3032		1.8852	
COV, r [std/mean]	5.52		5.67	
COV, both replic.	———		———	
Observation: (1)	0.5611		0.8006	
[atm-m3/m3] (2)	0.5319		0.7511	
(3)	0.5184		0.7429	
(4)	0.4913		0.6971	
Injection: (1)	10118		17093	
[Peak Area] (2)	9555		16186	
(3)	15403		20084	
(4)	16010		21040	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-4.7E+03
Y-INTERCEPT	=	1.1E+01
R-SQUARED	=	0.9840

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TEMPERATURE REGRESSION PLOT

Component 16
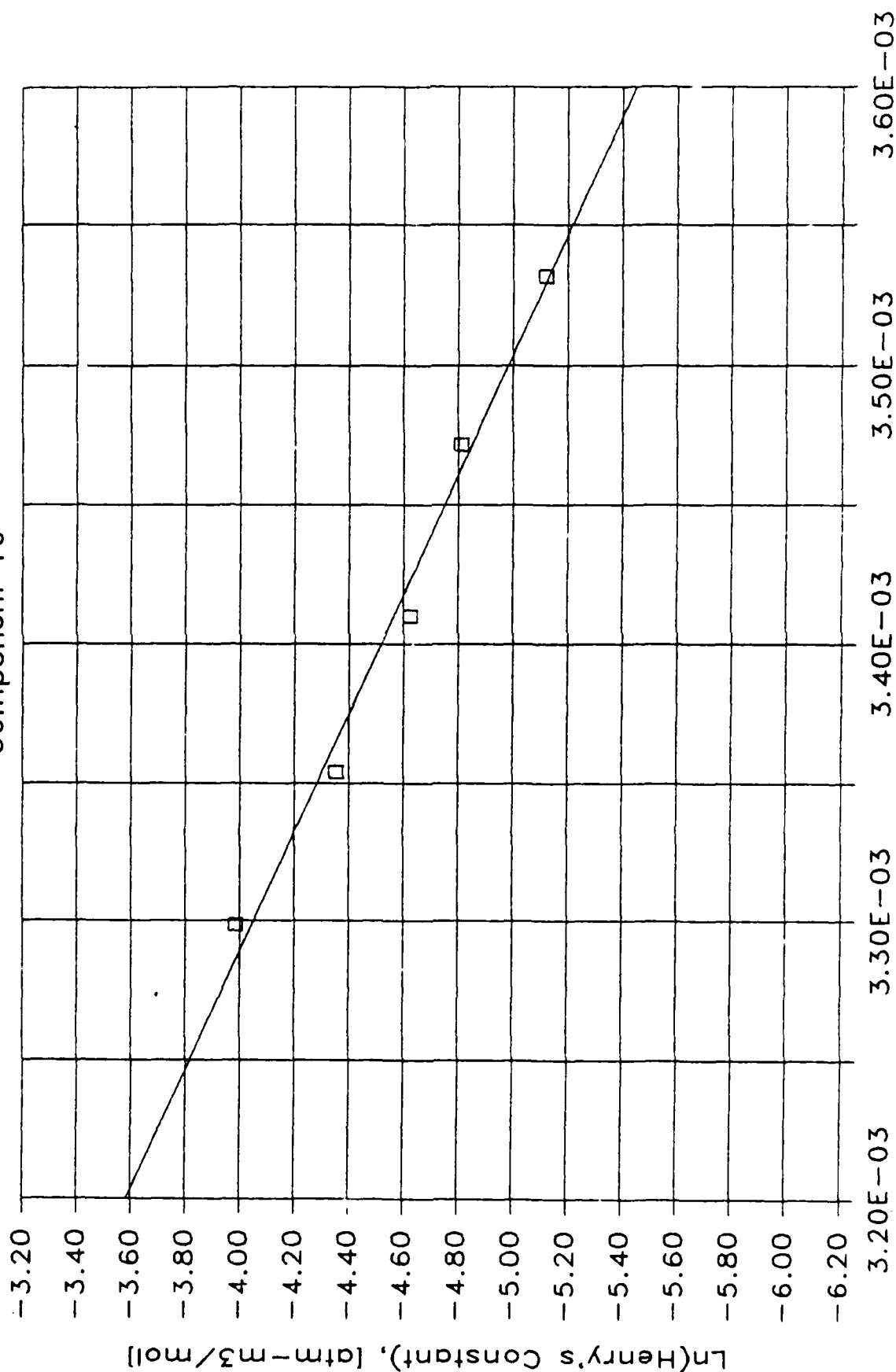
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.984

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95% CONFIDENCE TEST

Component 16

Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
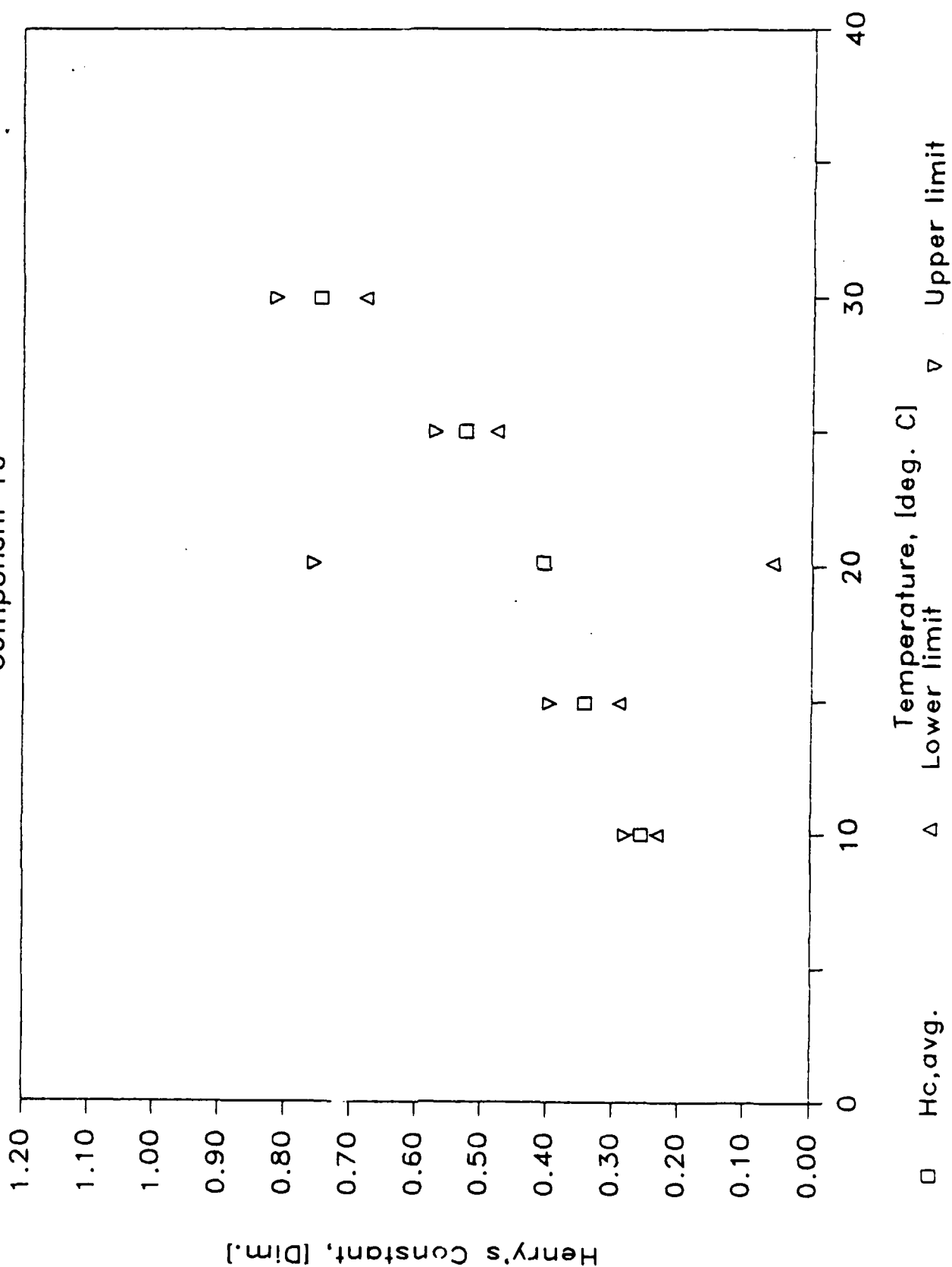
REGRESSION CONFIDENCE TEST

Component 16, 95% Confidence
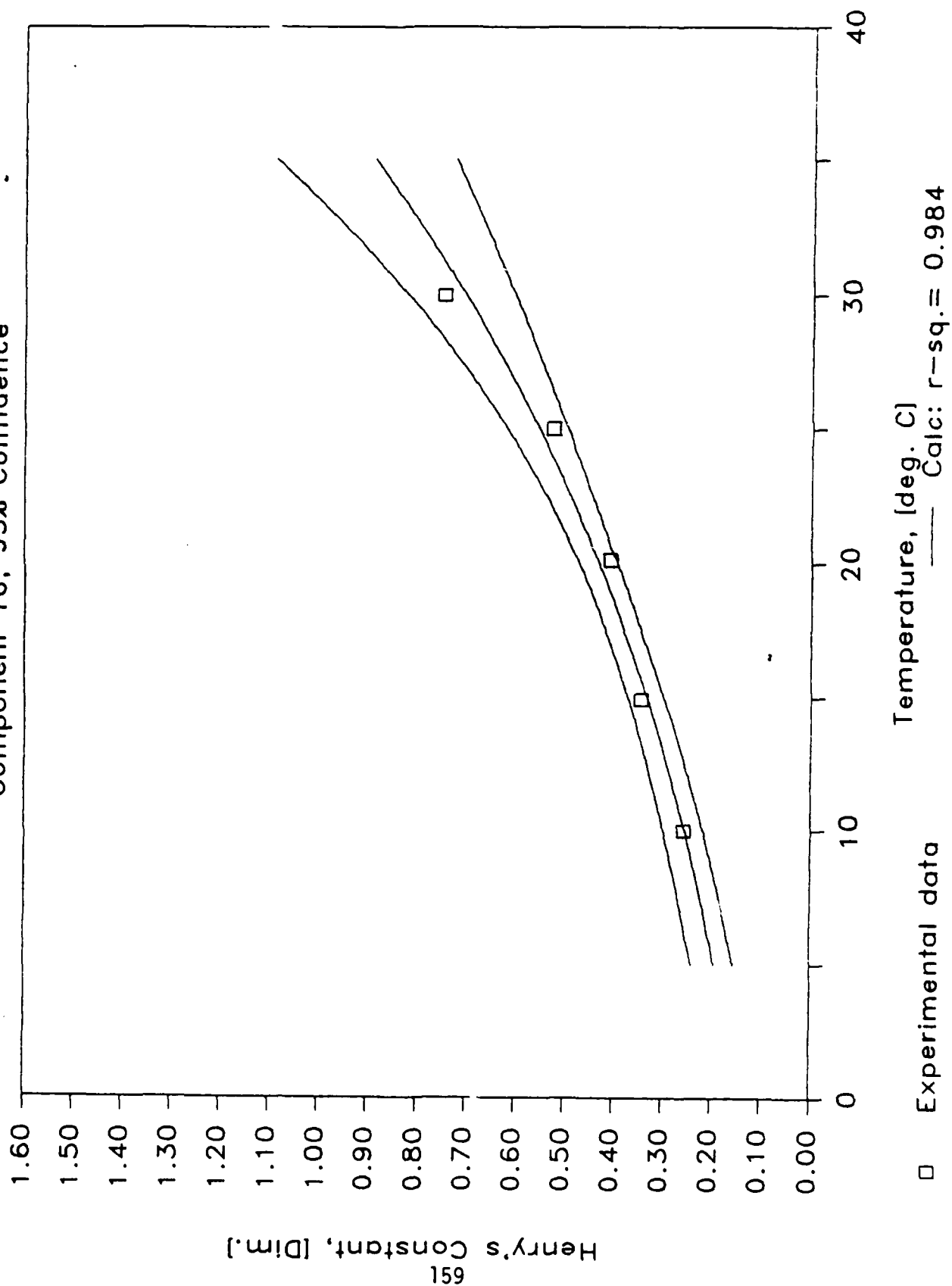
Temperature, [deg. C]

Henry's Constant, [Dim.]

□   Experimental data

—— Calc: r-sq.= 0.984

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)		16		14		15	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		4		4		4	
Component ID		17		17		17	
Temperature (C)		10		14.9		20.1	
Low Vol (ml)		30		30		30	
High Vol (ml)		210		210		210	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.1509	1.0E-25	0.1776	1.0E-25	0.2092	1.0E-25
H, avg: atm-mol/mol		194.6		233.0		279.4	
H, avg: atm-m3/mol		3.51E-03	1	4.20E-03	1	5.03E-03	1
H, avg: kPa-m3/mol		0.3552		0.4253		0.5100	
COV, r [std/mean]		1.66		2.38		3.61	
COV, both replic.		-----		-----		-----	
Observation: (1)		0.1518		0.1827		0.2126	
[atm-m3/m3] (2)		0.1538		0.1779		0.2006	
(3)		0.1480		0.1772		0.2178	
(4)		0.1499		0.1724		0.2056	
Injection: (1)		128310		205480		256860	
[Peak Area] (2)		126690		202090		260430	
(3)		437310		636050		731090	
(4)		434460		645260		755360	

		Temperature 4			Temperature 5		
RUN Number ---)	I	17		I	15		I
REPLICATE ---)	I	No. 1	No. 2	I	No. 1	No. 2	I
Group No.	I	4		I	4		I
Component ID	I	17		I	17		I
Temperature (C)	I	25		I	30		I
Low Vol (ml)	I	30		I	30		I
High Vol (ml)	I	210		I	210		I
System Vol (ml)	I	250		I	250		I
H,avg: atm-m3/m3	I	0.2281	1.0E-25	I	0.3097	1.0E-25	I
H,avg:atm-mol/mol	I	309.8		I	427.7		I
H,avg: atm-m3/mol	I	5.58E-03	1	I	7.70E-03	1	I
H,avg: kPa-m3/mol	I	0.5655		I	0.7807		I
COV, r [std/mean]	I	1.97		I	1.12		I
COV, both replic.	I	-----		I	-----		I
Observation: (1)	I	0.2268		I	0.3007		I
[atm-m3/m3] (2)	I	0.2228		I	0.3139		I
(3)	I	0.2335		I	0.3056		I
(4)	I	0.2294		I	0.3107		I
Injection: (1)	I	259590		I	433000		I
[Peak Area] (2)	I	264030		I	430250		I
(3)	I	711730		I	983360		I
(4)	I	719220		I	972920		I

Temperature Regression Parameters:

OF POINTS =   5

SLOPE =   -3.2E+03

Y-INTERCEPT =   5.6E+00

R-SQUARED =   0.9682

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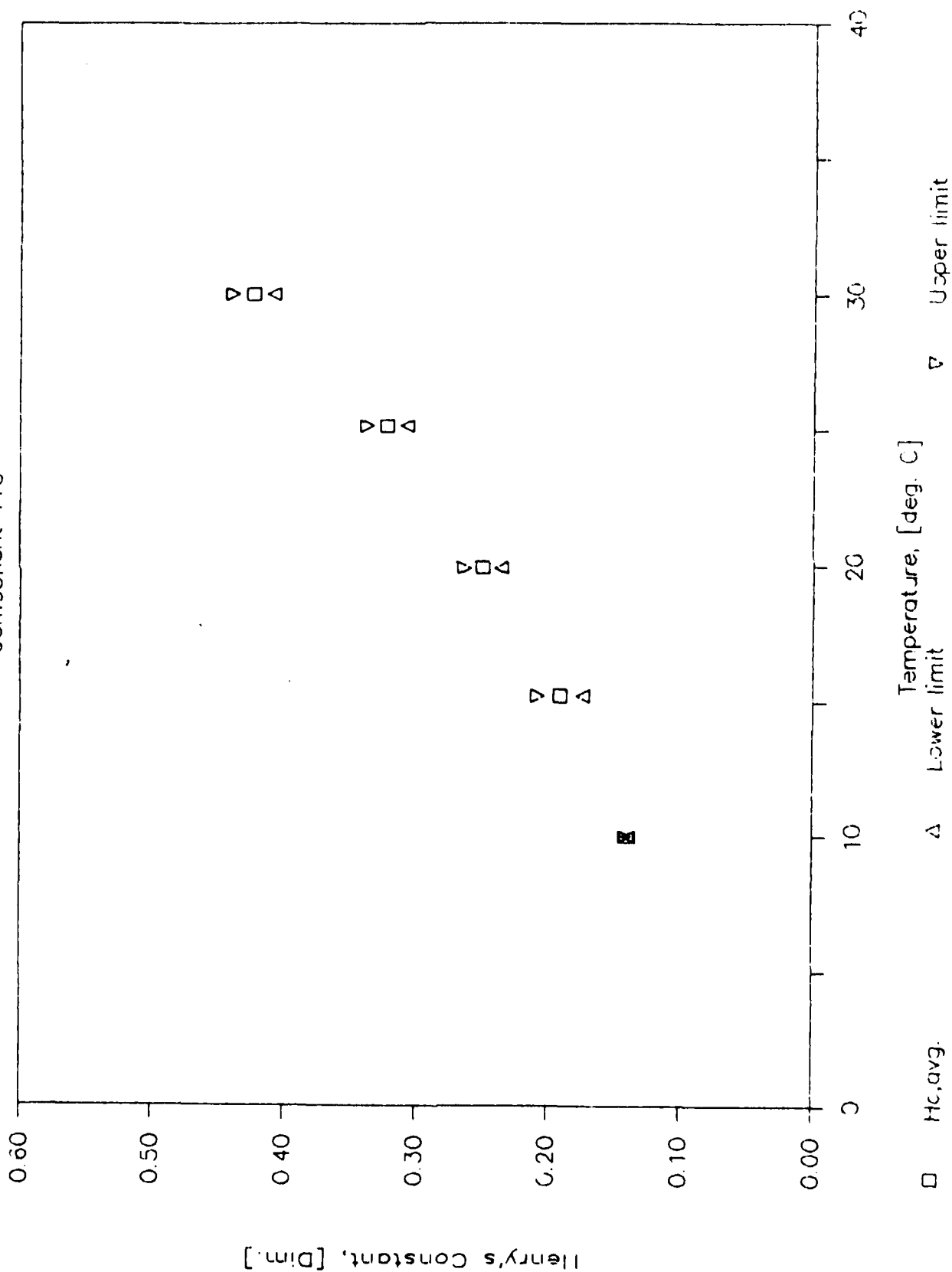
TEMPERATURE REGRESSION PLOT

Component 17
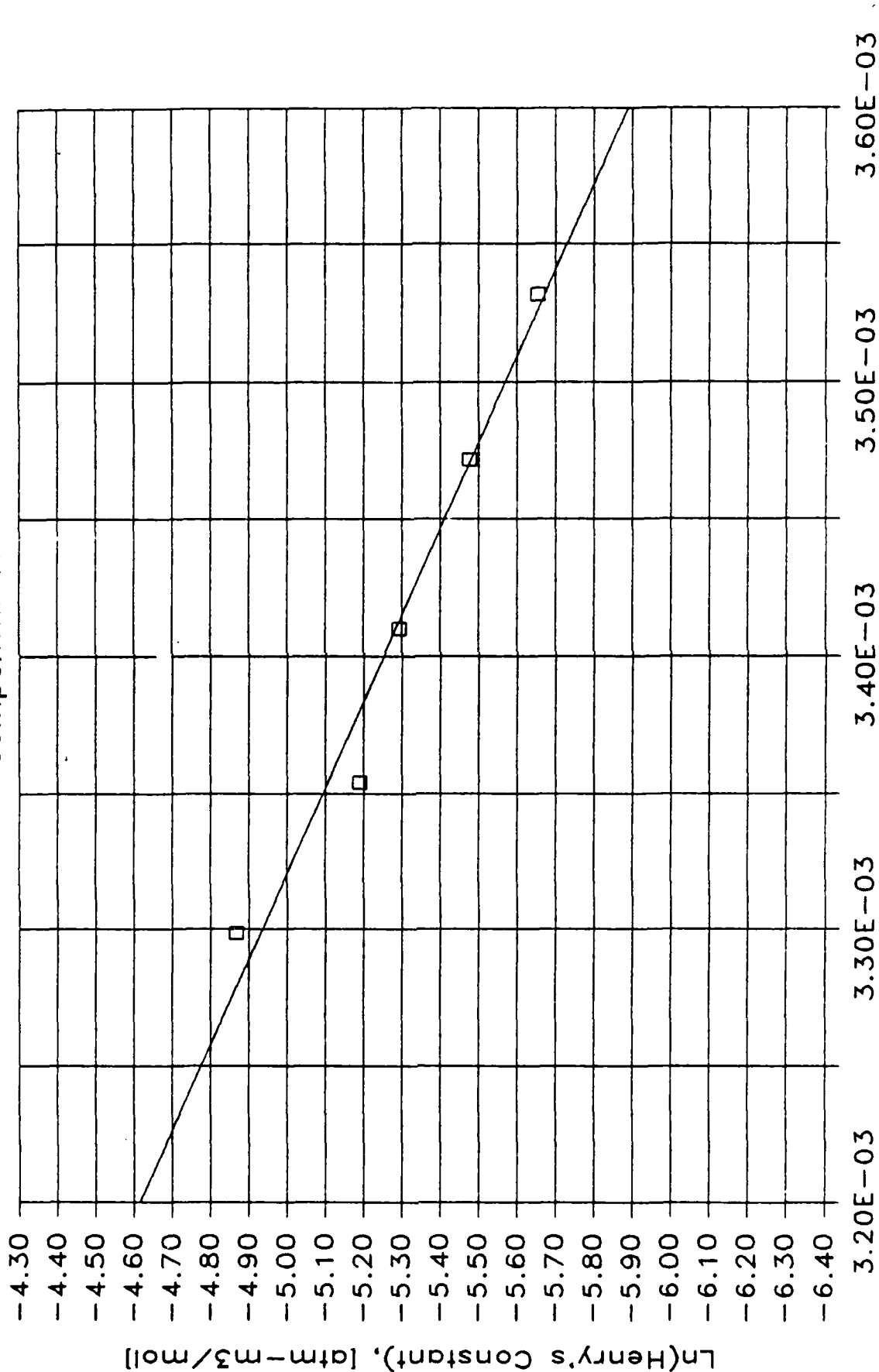
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9682

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95% CONFIDENCE TEST
Component 17

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc, avg. △ Lower limit ▽ Upper limit

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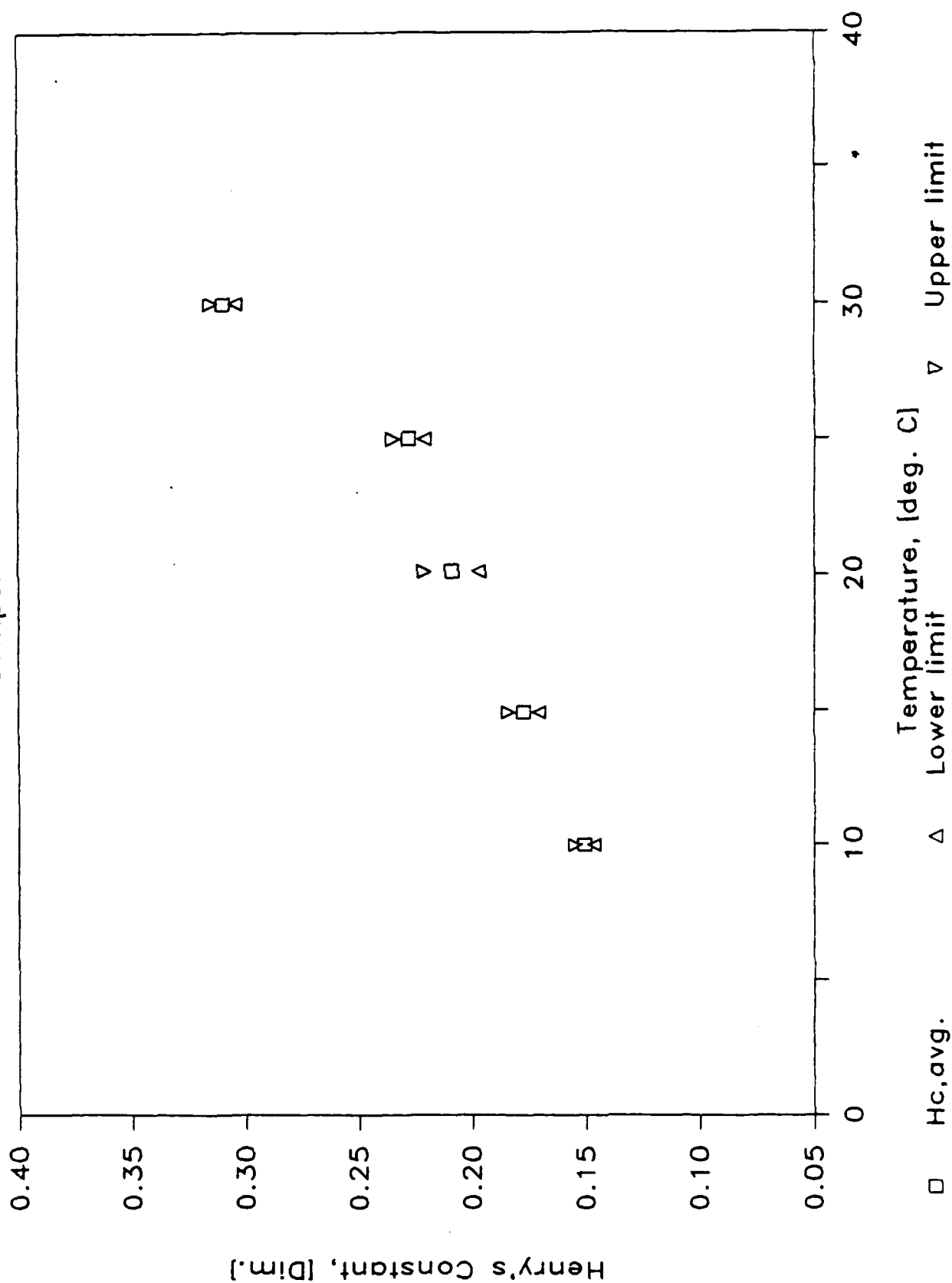
REGRESSION CONFIDENCE TEST

Component 17, 95% Confidence
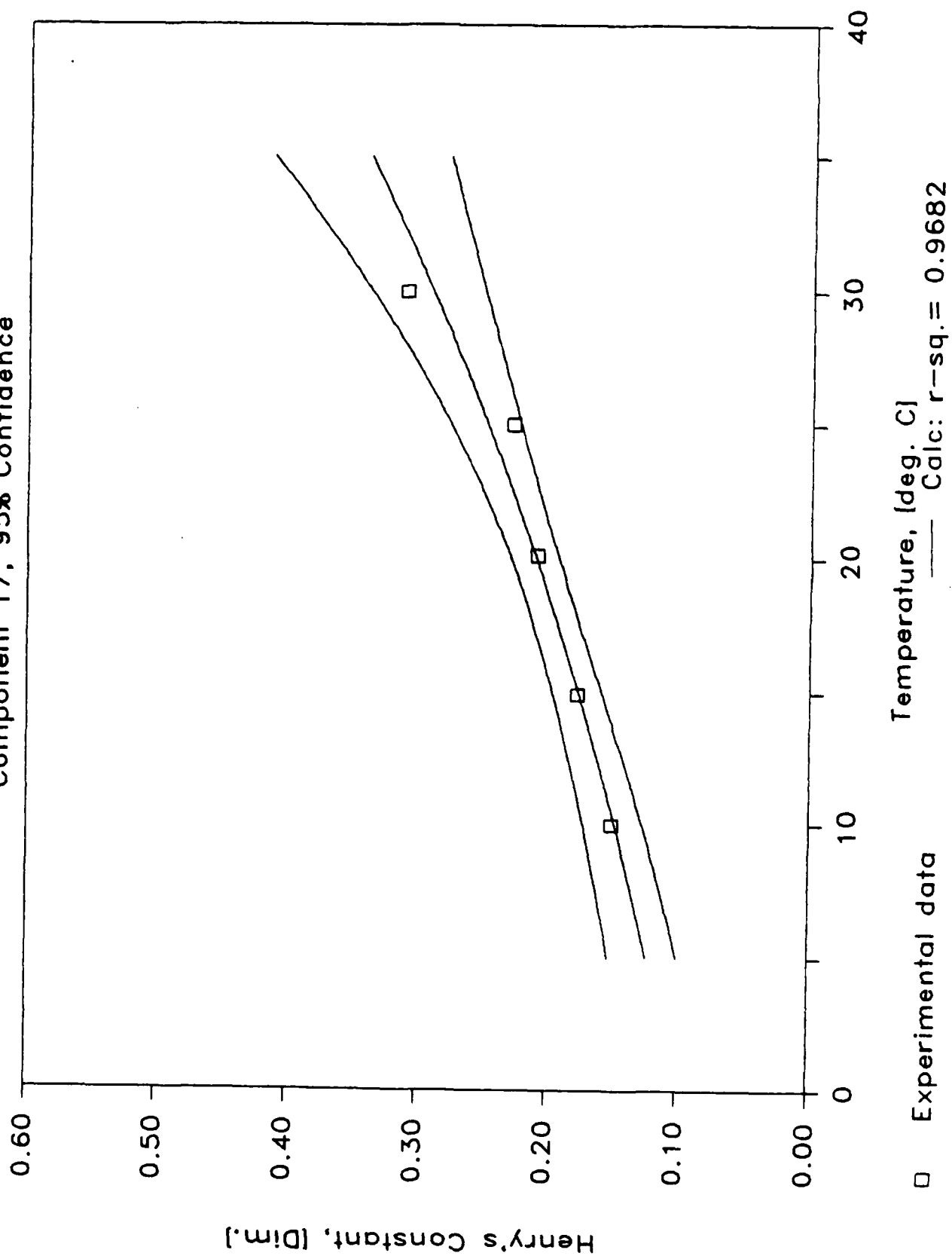
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.9682

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	1		1		2	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	5		5		5	
Component ID	18		18		18	
Temperature (C)	10		15		20.2	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H_r avg: atm-m3/m3	0.1583	1.0E-25	0.1920	1.0E-25	0.2340	1.0E-25
H_r avg: atm-mol/mol	204.1		252.1		312.7	
H_r avg: atm-m3/mol	3.68E-03	1	4.54E-03	1	5.63E-03	1
H_r avg: kPa-m3/mol	0.3726		0.4601		0.5708	
COV, r [std/mean]	2.43		2.66		1.92	
COV, both replic.	———		———		———	
Observation: (1)	0.1630		0.1946		0.2395	
[atm-m3/m3] (2)	0.1588		0.1978		0.2339	
(3)	0.1577		0.1864		0.2340	
(4)	0.1536		0.1894		0.2285	
Injection: (1)	1638800		1825900		2181000	
[Peak Area] (2)	1689100		1779700		2149300	
(3)	5642600		5673700		5965300	
(4)	5724900		5619900		6054900	

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	Temperature 4		Temperature 5	
RUN Number ---)	2		3	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2
Group No.	5		5	
Component ID	18		18	
Temperature (C)	24.9		29.9	
Low Vol (ml)	25		25	
High Vol (ml)	205		205	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	0.2556	1.0E-25	0.3122	1.0E-25
H, avg: atm-mol/mol	347.0		430.9	
H, avg: atm-m3/mol	6.25E-03	1	7.76E-03	1
H, avg: kPa-m3/mol	0.6334		0.7867	
COV, r [std/mean]	1.21		2.82	
COV, both replic.	———		———	
Observation: (1)	0.2590		0.3204	
[atm-m3/m3] (2)	0.2572		0.3192	
(3)	0.2540		0.3051	
(4)	0.2522		0.3040	
Injection: (1)	2788800		3695300	
[Peak Area] (2)	2753600		3576100	
(3)	7254900		8351900	
(4)	7288200		8371900	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -3.1E+03

Y-INTERCEPT   =   5.5E+00

R-SQUARED   =   0.9930

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TEMPERATURE REGRESSION PLOT

Component 18
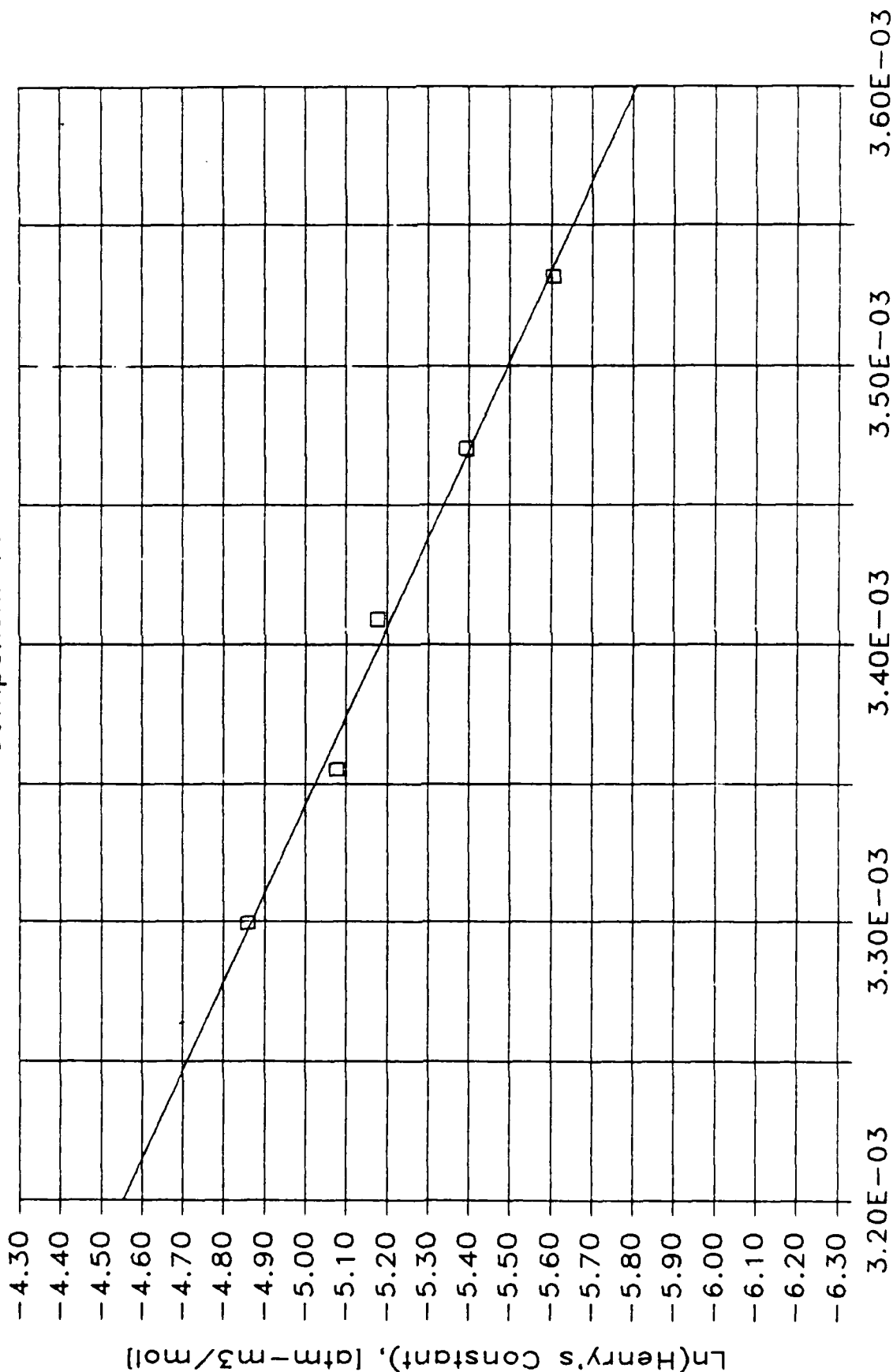
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.993

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95% CONFIDENCE TEST
Component 18

Legend:
- □ Hc,avg.
- △ Lower limit
- ▽ Upper limit

Temperature, [deg. C]

Henry's Constant, [Dim.]

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REGRESSION CONFIDENCE TEST

Component 18, 95% Confidence
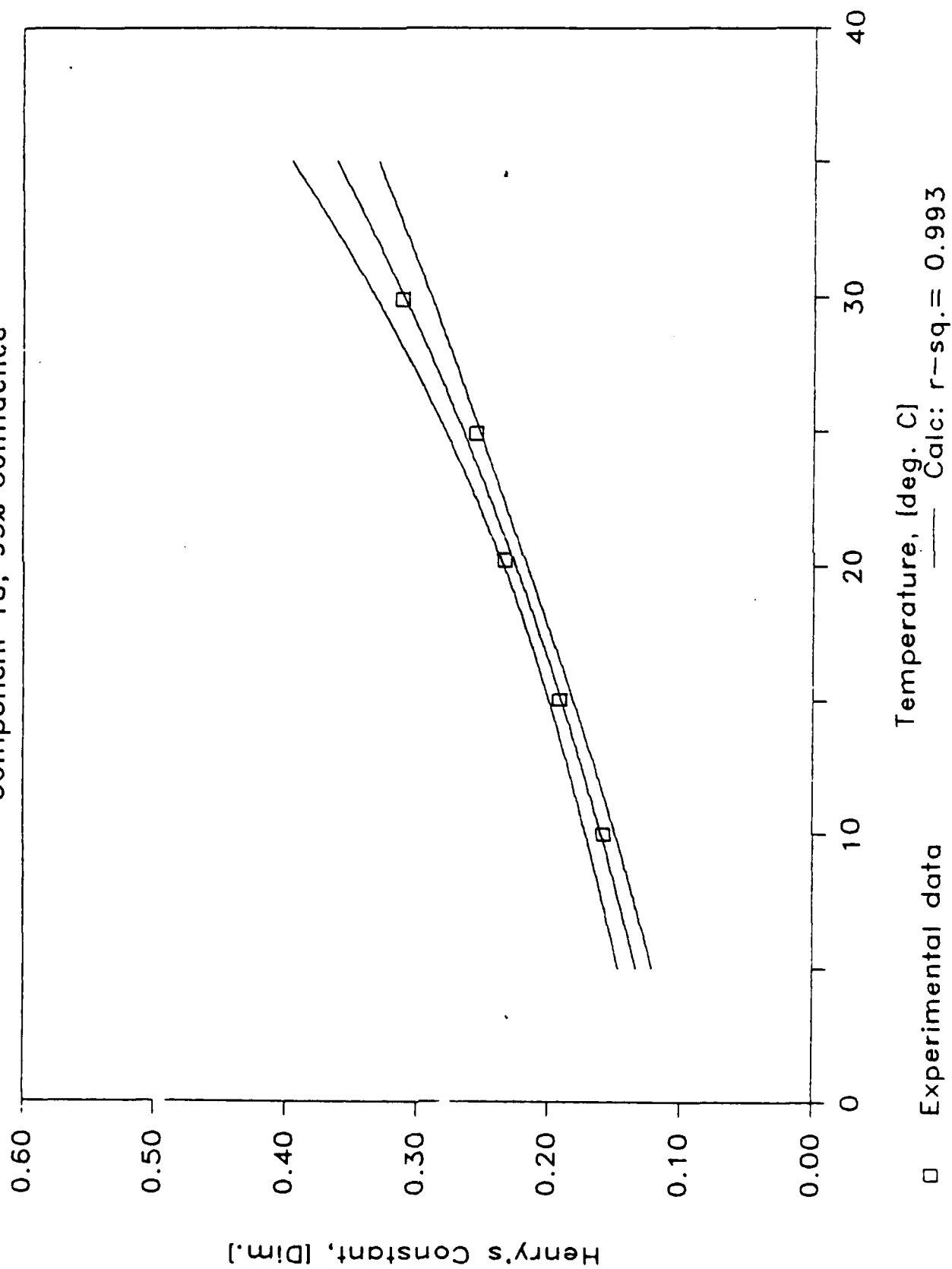
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
—— Calc: r-sq.= 0.993

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	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	5		5		6	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	5		5		5	
Component ID	19		19		19	
Temperature (C)	10		15		20.2	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.0583	1.0E-25	0.0549	1.0E-25	0.0612	1.0E-25
H, avg: atm-mol/mol	64.9		72.1		81.7	
H, avg: atm-m3/mol	1.17E-03	1	1.30E-03	1	1.47E-03	1
H, avg: kPa-m3/mol	0.1184		0.1316		0.1492	
COV, r [std/mean]	7.49		1.23		1.91	
COV, both replic.	———		———		———	
Observation: (1)	0.0526		0.0558		0.0622	
[atm-m3/m3] (2)	0.0543		0.0550		0.0621	
(3)	0.0463		0.0549		0.0602	
(4)	0.0480		0.0541		0.0601	
Injection: (1)	712420		880120		1087600	
[Peak Area] (2)	686070		875610		1075400	
(3)	4011000		4864500		5795100	
(4)	3971200		4886200		5798700	

	Temperature 4		Temperature 5	
RUN Number --->	6		7	
REPLICATE --->	No. 1	No. 2	No. 1	No. 2
Group No.	5		5	
Component ID	19		19	
Temperature (C)	25		29.9	
Low Vol (ml)	25		25	
High Vol (ml)	205		205	
System Vol (ml)	250		250	
H,avg: atm-m3/m3	0.0577	1.0E-25	0.0701	1.0E-25
H,avg:atm-mol/mol	78.3		96.8	
H,avg: atm-m3/mol	1.41E-03	1	1.74E-03	1
H,avg: kPa-m3/mol	0.1430		0.1767	
COV, r [std/mean]	1.93		2.42	
COV, both replic.	------		------	
Observation: (1)	0.0574		0.0684	
[atm-m3/m3] (2)	0.0590		0.0689	
(3)	0.0564		0.0713	
(4)	0.0580		0.0718	
Injection: (1)	1209900		1434300	
[Peak Area] (2)	1203000		1456500	
(3)	6625600		7388800	
(4)	6563600		7369000	

Temperature Regression Parameters:

$$\text{\# OF POINTS} \quad = \quad 5$$

$$\text{SLOPE} \quad = \quad -1.5E+03$$

$$\text{Y-INTERCEPT} \quad = \quad -1.4E+00$$

$$\text{R-SQUARED} \quad = \quad 0.8777$$

TEMPERATURE REGRESSION PLOT

Component 19

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
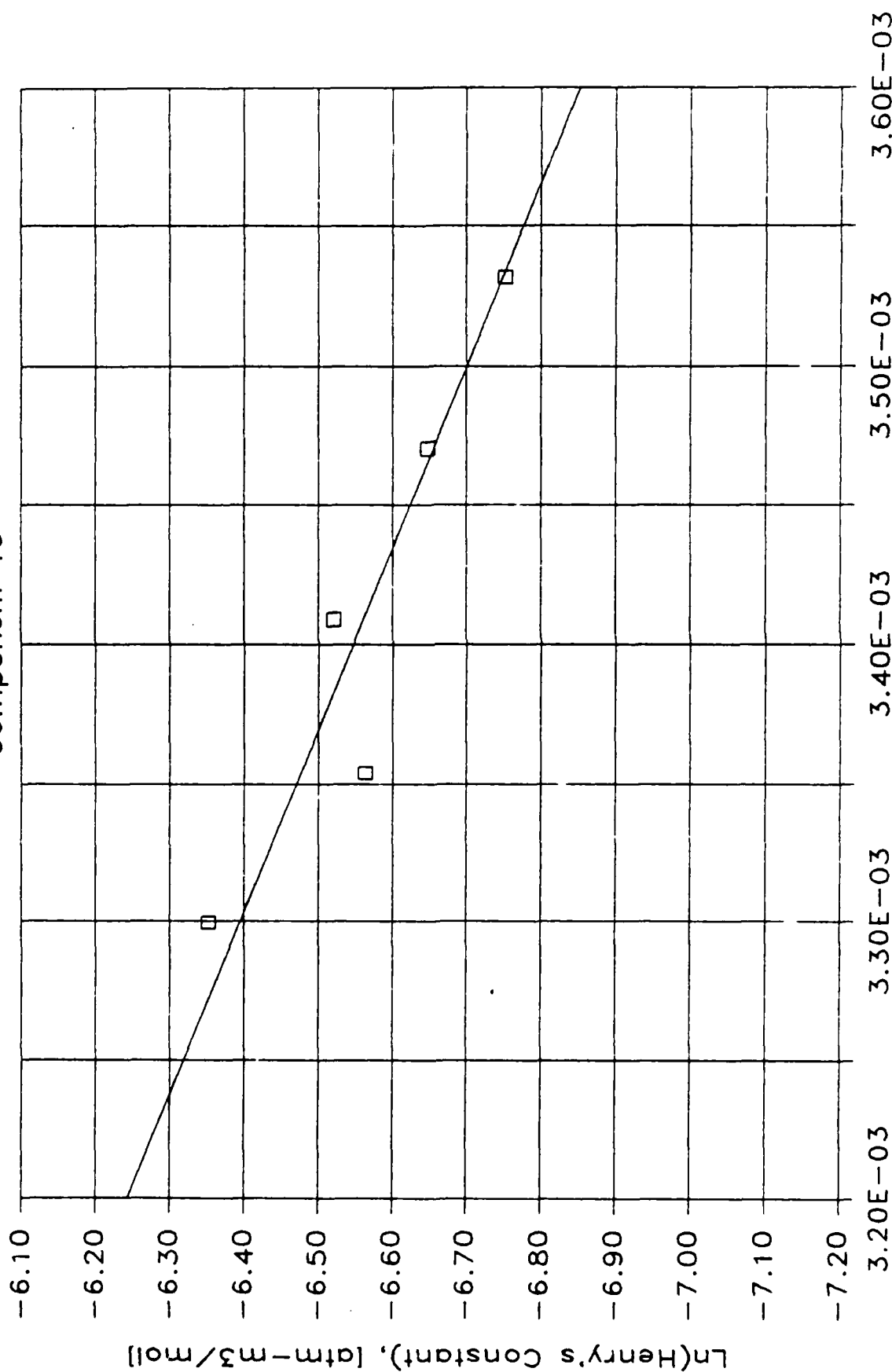
□ Experimental data

—— Regr: r-sq.= 0.8777

95% CONFIDENCE TEST

Component 19

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

REGRESSION CONFIDENCE TEST

Component 19, 95% Confidence
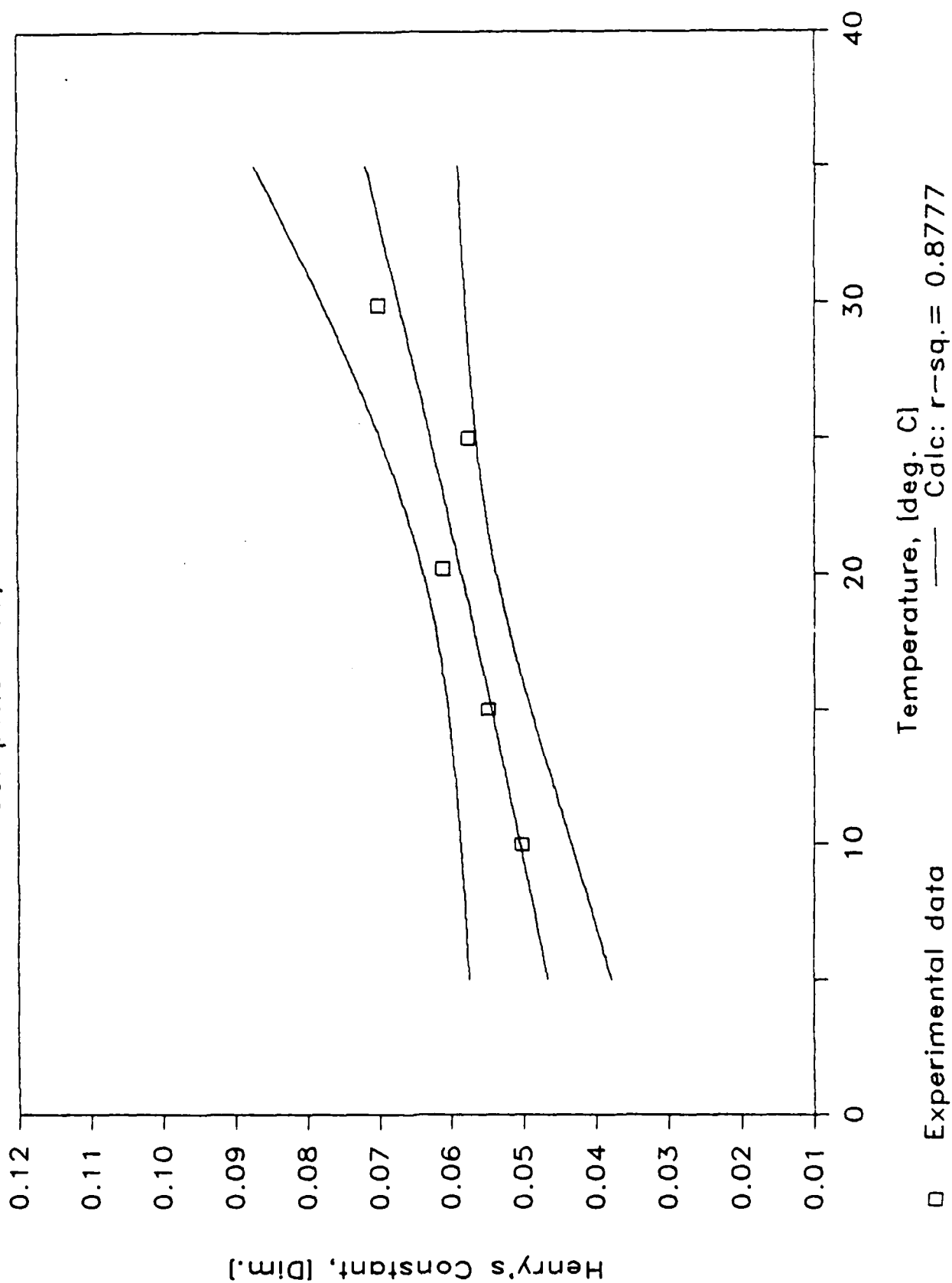
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
—— Calc: r—sq.= 0.8777

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	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	48		10		6	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	1		1		1	
Component ID	19		19		19	
Temperature (C)	10.1		15		20	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.0303	1.0E-25	0.0372	1.0E-25	0.0504	1.0E-25
H,avg:atm-mol/mol	39.1		48.8		67.3	
H,avg: atm-m3/mol	7.05E-04	1	8.79E-04	1	1.21E-03	1
H,avg: kPa-m3/mol	0.0714		0.0890		0.1229	
COV, r [std/mean]	4.37		4.06		7.81	
COV, both replic.	——		——		——	
Observation: (1)	0.0318		0.0370		0.0530	
[atm-m3/m3] (2)	0.0310		0.0390		0.0464	
(3)	0.0296		0.0353		0.0545	
(4)	0.0289		0.0373		0.0478	
Injection: (1)	592870		769740		957000	
[Peak Area] (2)	584120		761090		965350	
(3)	3806400		4772400		5374700	
(4)	3825800		4711800		5593000	

		Temperature 4		Temperature 5	
RUN Number —)		11		49	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		1		1	
Component ID		19		19	
Temperature (C)		25		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0596	1.0E-25	0.0705	1.0E-25
H, avg:atm-mol/mol		80.9		97.3	
H, avg: atm-m3/mol		1.46E-03	1	1.75E-03	1
H, avg: kPa-m3/mol		0.1477		0.1777	
COV, r [std/mean]		1.57		6.87	
COV, both replic.		——————		——————	
Observation:	(1)	0.0597		0.0702	
[atm-m3/m3]	(2)	0.0607		0.0646	
	(3)	0.0584		0.0765	
	(4)	0.0594		0.0706	
Injection:	(1)	1222000		1432100	
[Peak Area]	(2)	1213200		1479200	
	(3)	6603100		7305500	
	(4)	6566300		7530500	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$
\begin{aligned}
\text{\# OF POINTS} &= 5 \\
\text{SLOPE} &= -4.0E+03 \\
\text{Y-INTERCEPT} &= 6.9E+00 \\
\text{R-SQUARED} &= 0.9911
\end{aligned}
$$

TEMPERATURE REGRESSION PLOT

Component 119
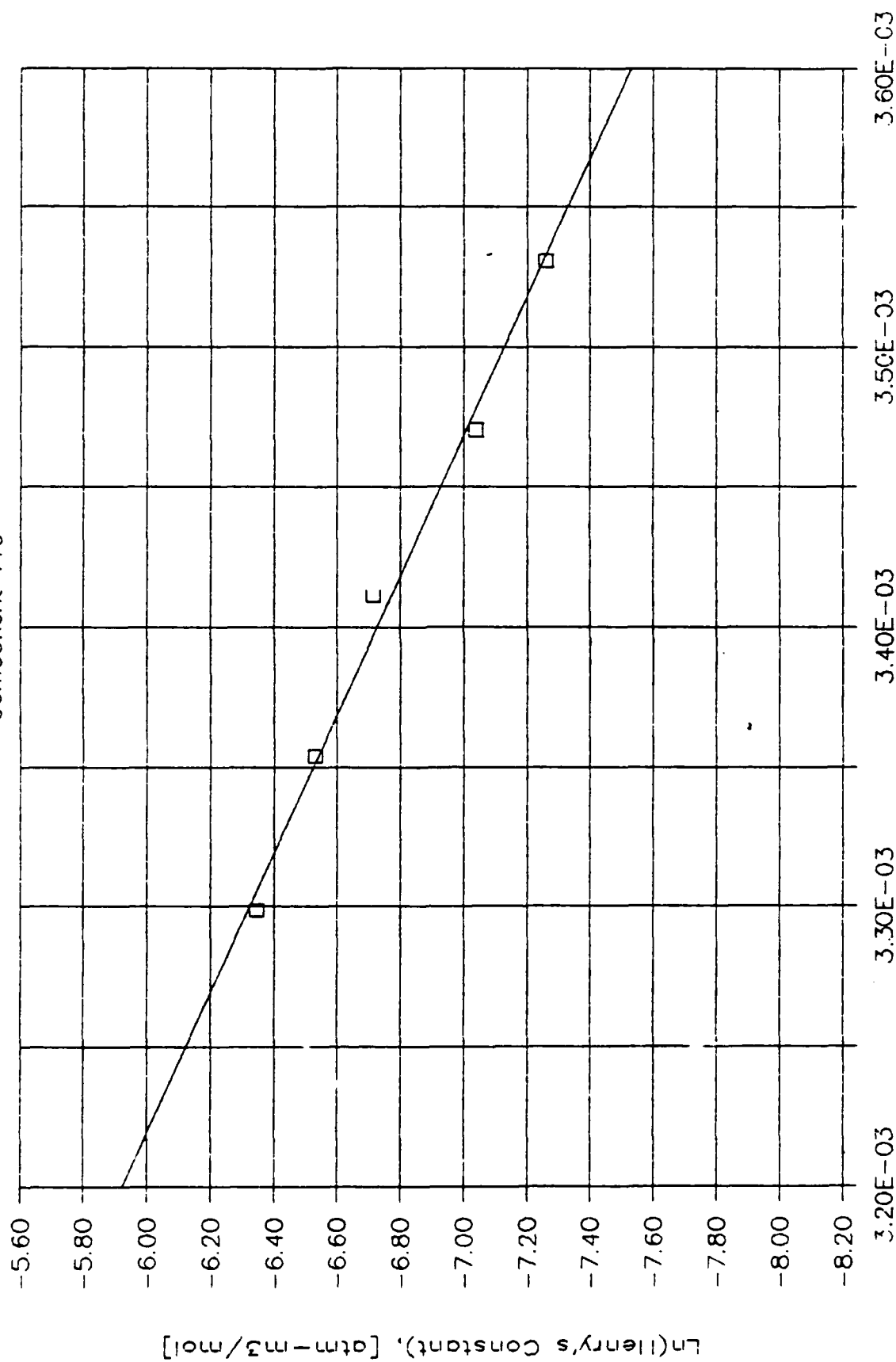
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

Regr: r-sq.= 0.9911

□   Experimental data

3.20E-03   3.30E-03   3.40E-03   3.50E-03   3.60E-03

-5.60   -5.80   -6.00   -6.20   -6.40   -6.60   -6.80   -7.00   -7.20   -7.40   -7.60   -7.80   -8.00   -8.20

95% CONFIDENCE TEST

Component 119

Henry's Constant, [Dim.] vs **Temperature, [deg. C]**

□ Hc,avg. △ Lower limit ▽ Upper limit

REGRESSION CONFIDENCE TEST

Component 119, 95% Confidence
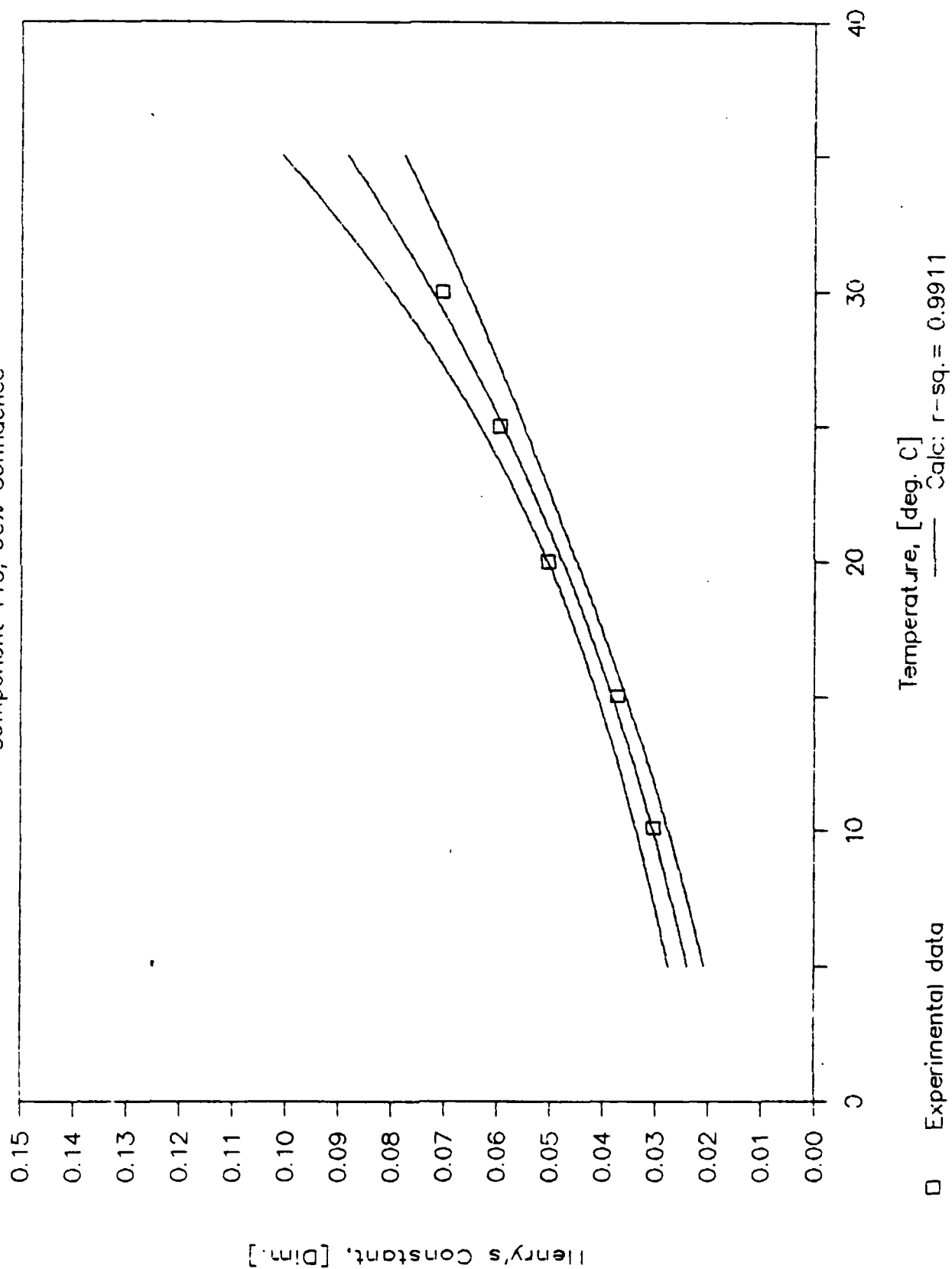
Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Experimental data

—— Calc: r-sq. = 0.9911

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)	9		9		10	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	5		5		5	
Component ID	20		20		20	
Temperature (C)	10		15		20.2	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.4151	1.0E-25	0.4870	1.0E-25	0.6069	1.0E-25
H,avg:atm-mol/mol	535.4		639.2		810.9	
H,avg: atm-m3/mol	9.65E-03	1	1.15E-02	1	1.46E-02	1
H,avg: kPa-m3/mol	0.9774		1.1668		1.4802	
COV, r [std/mean]	2.98		5.51		0.58	
COV, both replic.	——		——		——	
Observation: (1)	0.4301		0.5012		0.6025	
[atm-m3/m3] (2)	0.4117		0.5168		0.6071	
(3)	0.4183		0.4578		0.6066	
(4)	0.4005		0.4722		0.6112	
Injection: (1)	701970		729790		871160	
[Peak Area] (2)	688380		683970		875420	
(3)	1293400		1205400		1259300	
(4)	1333800		1179100		1252400	

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		Temperature 4		Temperature 5	
RUN Number ——)		10		11	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2
Group No.		5		5	
Component ID		20		20	
Temperature (C)		25.1		29.9	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		0.7105	1.0E-25	0.8480	1.0E-25
H,avg:atm-mol/mol		965.2		1170.5	
H,avg:.atm-m3/mol		1.74E-02	1	2.11E-02	1
H,avg: kPa-m3/mol		1.7620		2.1367	
COV, r [std/mean]		1.35		2.24	
COV, both replic.		———		———	
Observation:	(1)	0.7193		0.8713	
[atm-m3/m3]	(2)	0.7028		0.8463	
	(3)	0.7183		0.8493	
	(4)	0.7017		0.8249	
Injection:	(1)	1193200		1550900	
[Peak Area]	(2)	1191900		1522300	
	(3)	1515800		1713400	
	(4)	1541800		1750100	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.4E+03
Y-INTERCEPT	=	7.4E+00
R-SQUARED	=	0.9983

TEMPERATURE REGRESSION PLOT

Component 20

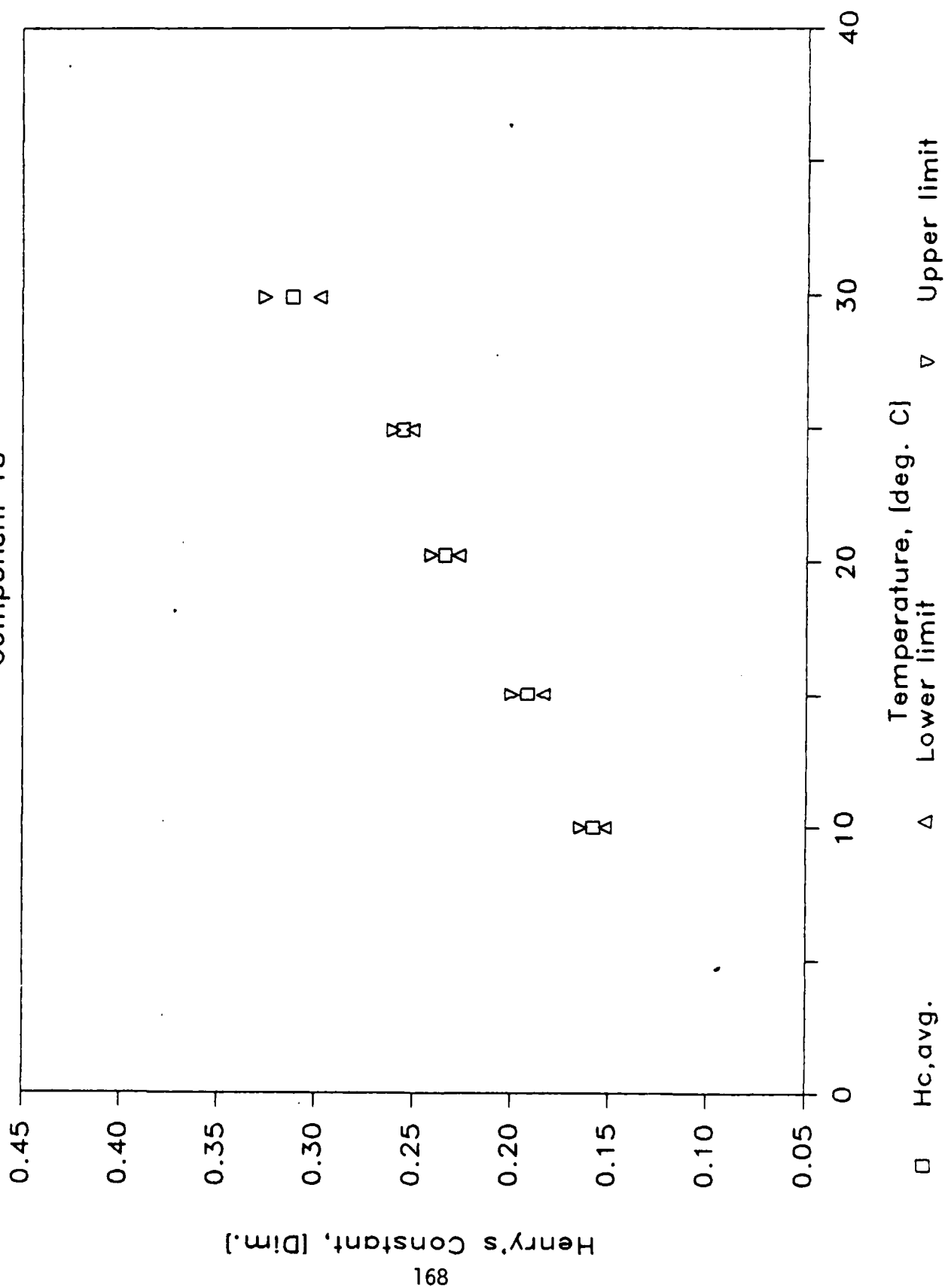Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9983

95% CONFIDENCE TEST

Component 20

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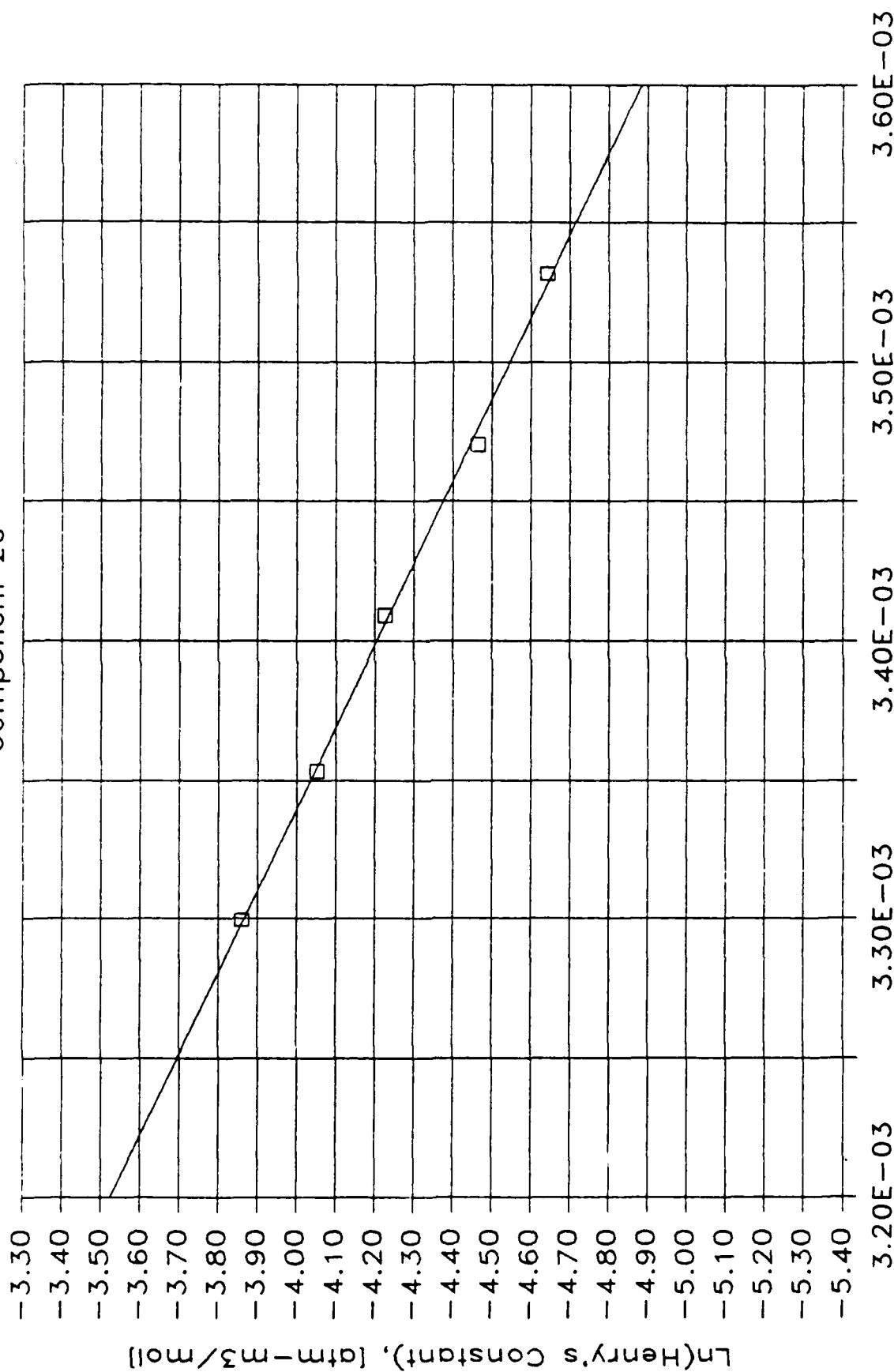
REGRESSION CONFIDENCE TEST

Component 20, 95% Confidence
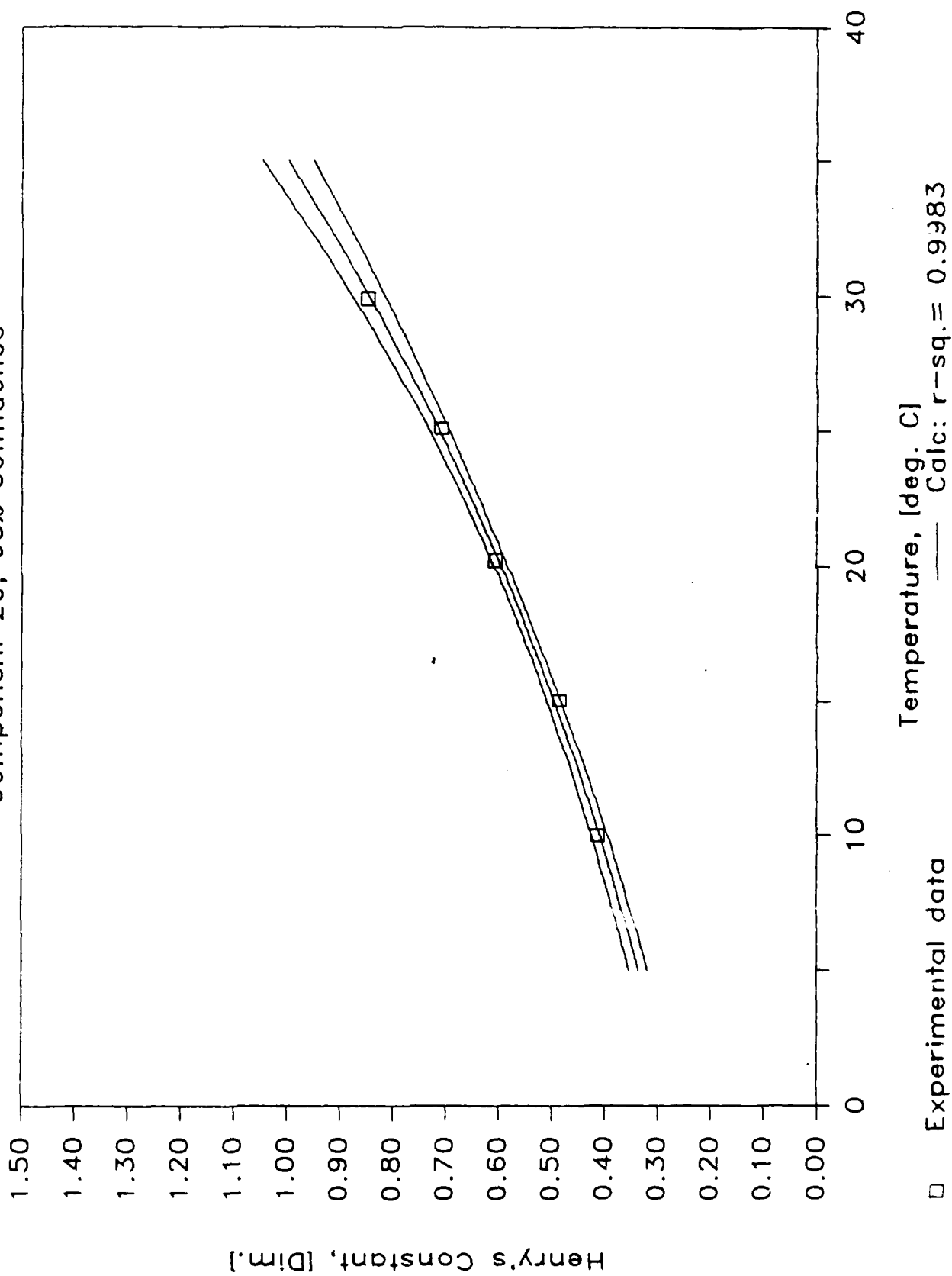
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.9983

		Temperature 1		Temperature 2		Temperature 3		
RUN Number —)		13		13		14		
REPLICATE —)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	
Group No.		5		5		5		
Component ID		21		21		21		
Temperature (C)		10		15		20.2		
Low Vol (ml)		25		25		25		
High Vol (ml)		205		205		205		
System Vol (ml)		250		250		250		
H, avg: atm-m3/m3		0.0500	1.0E-25	0.0422	1.0E-25	0.0506	1.0E-25	
H, avg:atm-mol/mol		64.5		55.3		67.6		
H, avg: atm-m3/mol		1.16E-03	1	9.97E-04	1	1.22E-03	1	
H, avg: kPa-m3/mol		0.1178		0.1010		0.1234		
COV, r [std/mean]		11.24		6.24		5.12		
COV, both replic.		——		——		——		
Observation:	(1)	0.0564		0.0439		0.0536		
[atm-m3/m3]	(2)	0.0526		0.0449		0.0518		
	(3)	0.0473		0.0394		0.0494		
	(4)	0.0437		0.0404		0.0477		
Injection:	(1)	179240		222690		291140		
[Peak Area]	(2)	169820		216540		284070		
	(3)	986870		1321800		1629700		
	(4)	1008900		1313400		1647100		

		Temperature 4		Temperature 5	
RUN Number ——)		14		15	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2
Group No.		5		5	
Component ID		21		21	
Temperature (C)		25		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		0.0429	1.0E-25	0.0504	1.0E-25
H,avg:atm-mol/mol		58.2		69.6	
H,avg: atm-m3/mol		1.05E-03	1	1.25E-03	1
H,avg: kPa-m3/mol		0.1063		0.1270	
COV, r [std/mean]		10.91		9.18	
COV, both replic.		———		———	
Observation:	(1)	0.0464		0.0504	
[atm-m3/m3]	(2)	0.0474		0.0561	
	(3)	0.0384		0.0448	
	(4)	0.0394		0.0503	
Injection:	(1)	344040		410050	
[Peak Area]	(2)	327070		397070	
	(3)	2015300		2343600	
	(4)	2002200		2266300	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -3.4E+02

Y-INTERCEPT   =   -5.6E+00

R-SQUARED   =   0.1043

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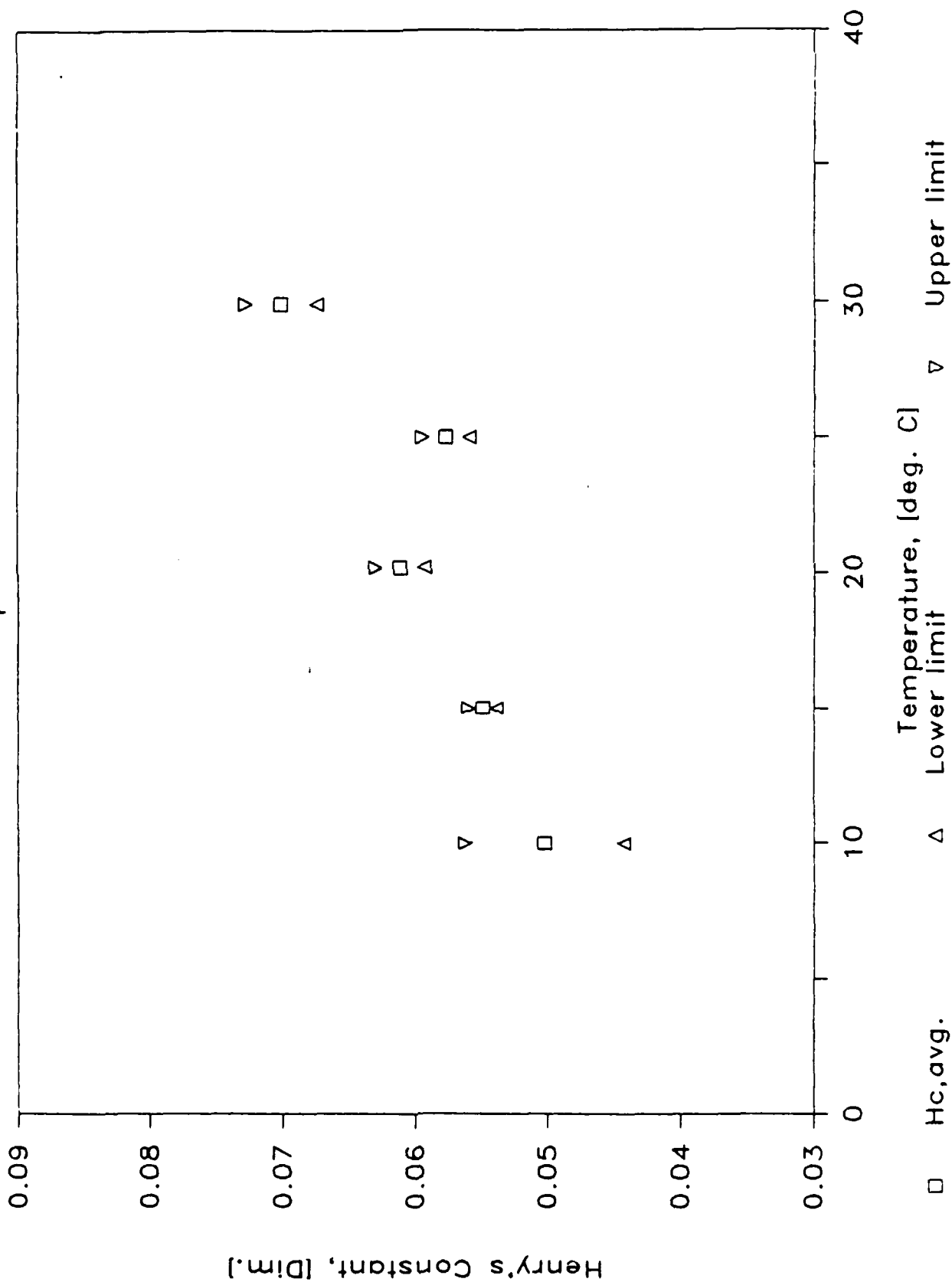# TEMPERATURE REGRESSION PLOT

Component 21

Ln(Henry's Constant), [atm–m3/mol]

Reciprocal Temperature, [1/K]
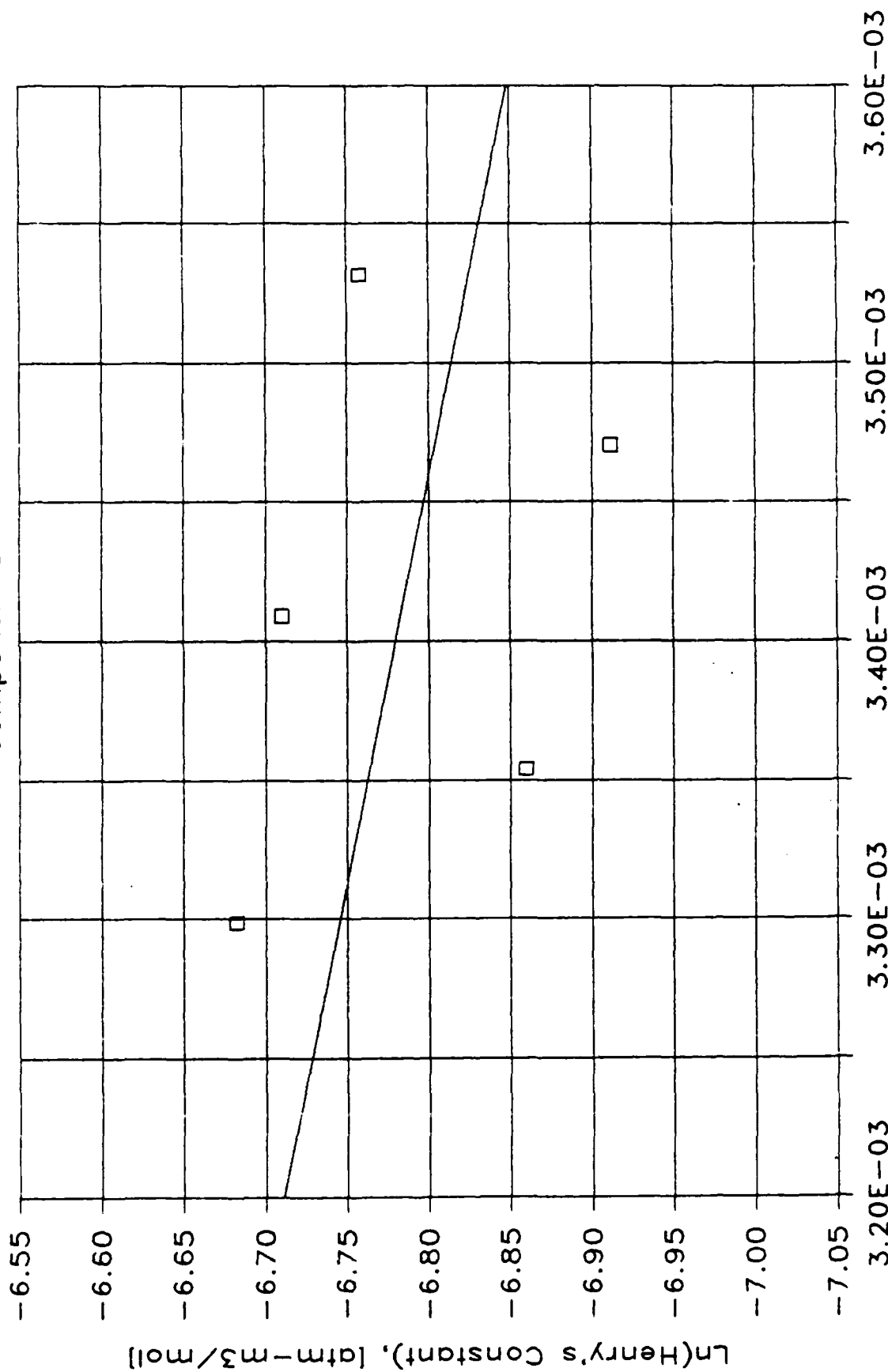
□ Experimental data

—— Regr: r–sq.= 0.1043

95% CONFIDENCE TEST
Component 21

Henry's Constant, [Dim.]

Temperature, [deg. C]

△ Lower limit   ▽ Upper limit

□ Hc,avg.
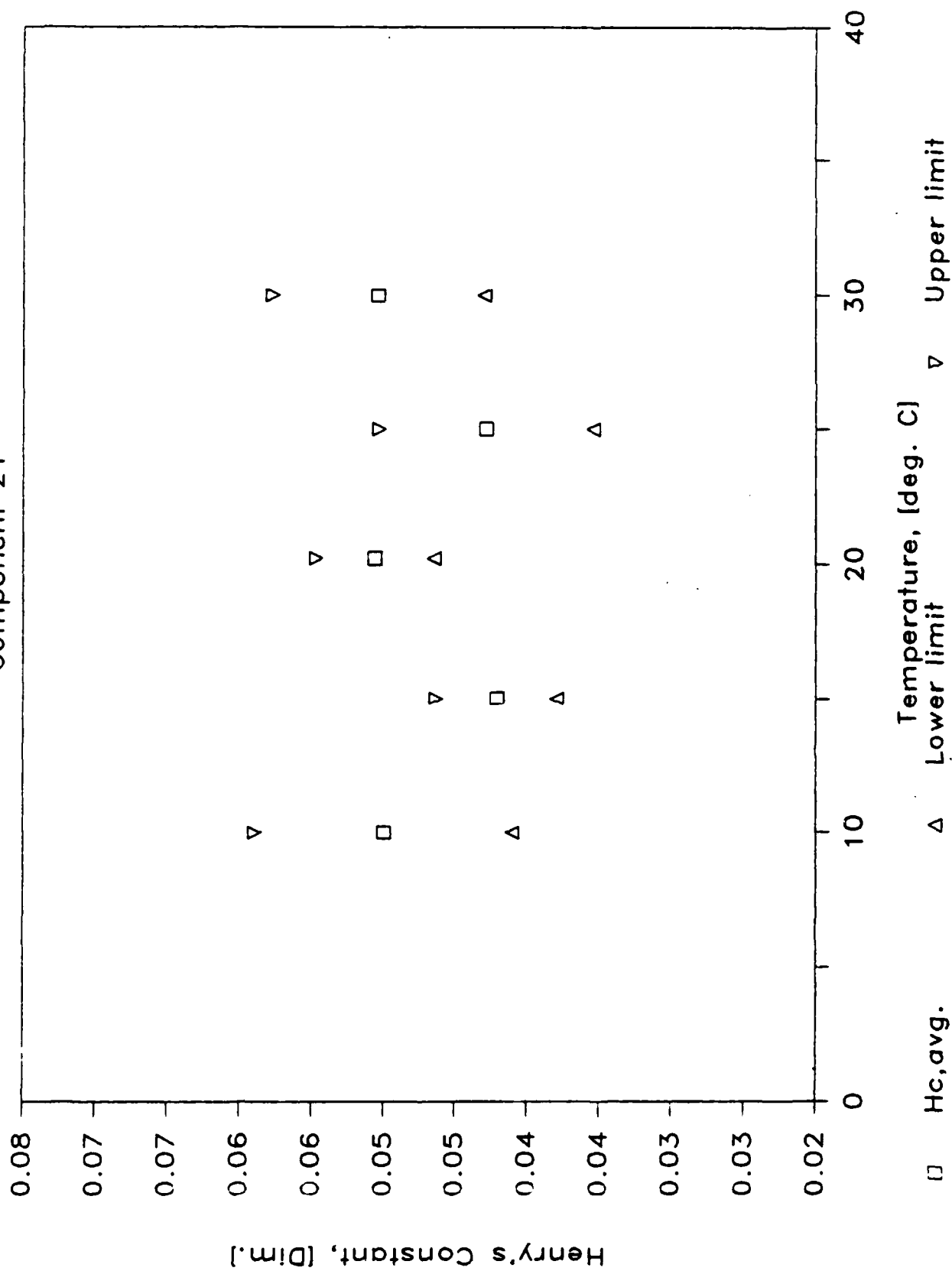
REGRESSION CONFIDENCE TEST

Component 21, 95% Confidence
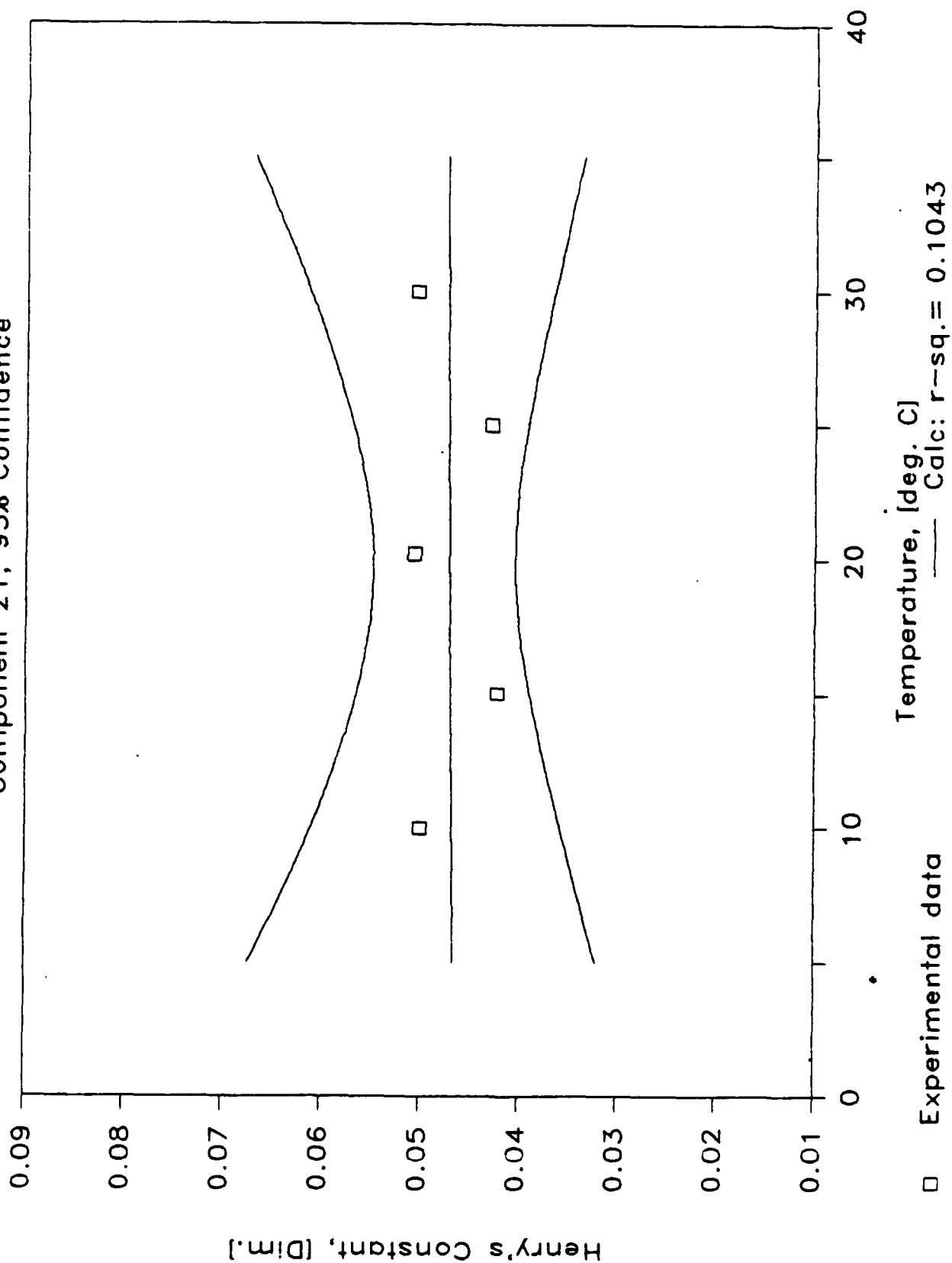
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.1043

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	2		2		3	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	1		1		1	
Component ID	121		121		121	
Temperature (C)	10.1		15		20	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.0169	1.0E-25	0.0267	1.0E-25	0.0308	1.0E-25
H,avg:atm-mol/mol	21.8		35.0		41.1	
H,avg: atm-m3/mol	3.92E-04	1	6.30E-04	1	7.41E-04	1
H,avg: kPa-m3/mol	0.0397		0.0639		0.0751	
COV, r [std/mean]	25.79		7.41		8.64	
COV, both replic.	———		———		———	
Observation: (1)	0.0219		0.0282		0.0340	
[atm-m3/m3] (2)	0.0150		0.0285		0.0315	
(3)	0.0187		0.0248		0.0301	
(4)	0.0119		0.0251		0.0276	
Injection: (1)	178840		232120		287330	
[Peak Area] (2)	174610		226620		279850	
(3)	1230800		1527500		1817400	
(4)	1296500		1524200		1848900	

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		Temperature 4		Temperature 5	
RUN Number ---)		3		3	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		1		1	
Component ID		121		121	
Temperature (C)		25		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0371	1.0E-25	0.0535	1.0E-25
H, avg:atm-mol/mol		50.4		73.8	
H, avg: atm-m3/mol		9.08E-04	1	1.33E-03	1
H, avg: kPa-m3/mol		0.0920		0.1348	
COV, r [std/mean]		8.82		2.55	
COV, both replic.		------		------	
Observation:	(1)	0.0404		0.0552	
[atm-m3/m3]	(2)	0.0395		0.0535	
	(3)	0.0347		0.0535	
	(4)	0.0339		0.0518	
Injection:	(1)	392020		520400	
[Peak Area]	(2)	377940		515300	
	(3)	2378900		2886300	
	(4)	2392500		2914500	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

          # OF POINTS   =   5

              SLOPE   =   -4.8E+03

        Y-INTERCEPT   =   9.3E+00
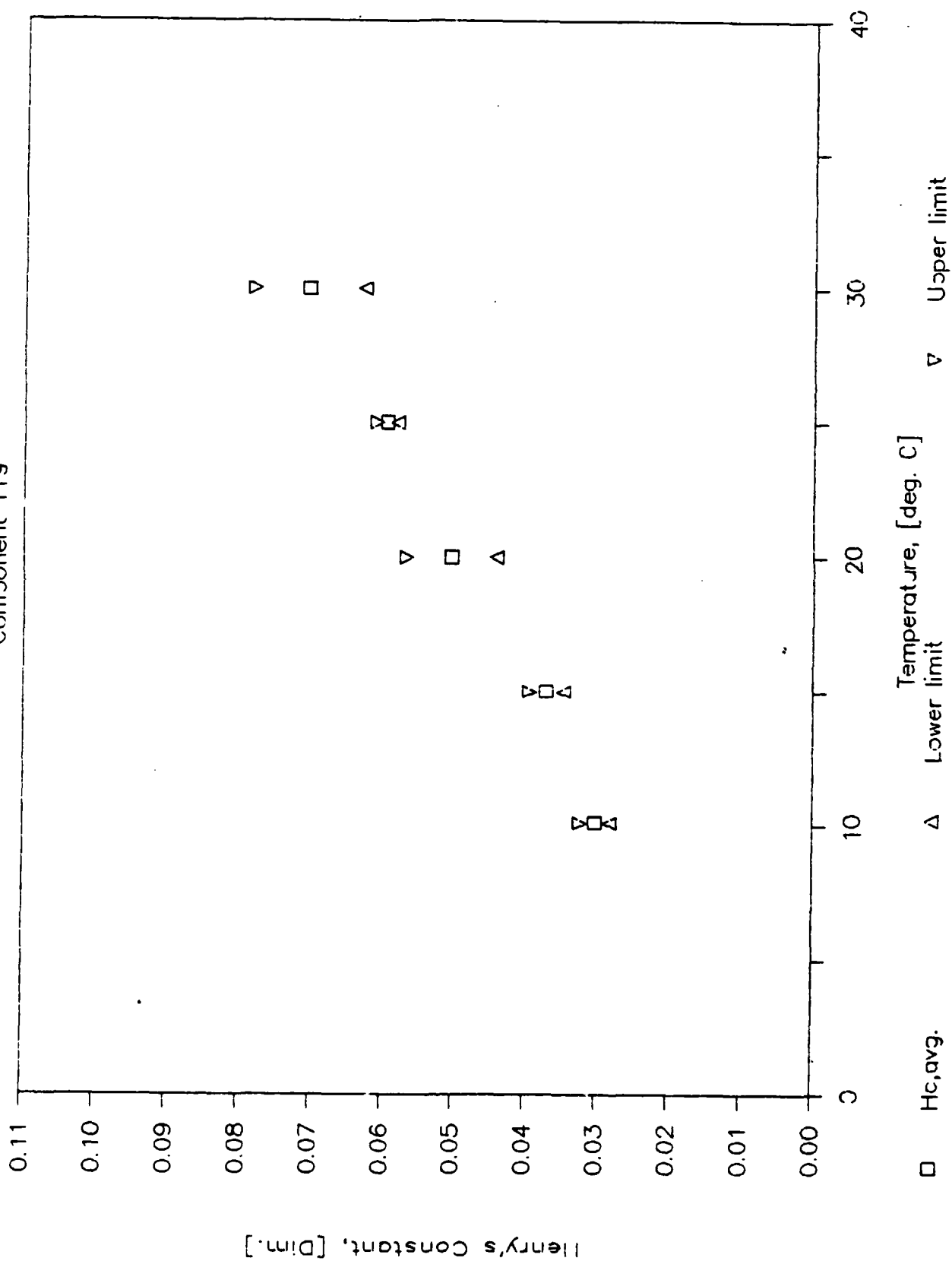
         R-SQUARED   =   0.9683

TEMPERATURE REGRESSION PLOT

Component 121

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

Regr: r-sq.= 0.9683

□ Experimental data

95% CONFIDENCE TEST

Component 121

Henry's Constant, [Dim.]

Temperature, [deg. C]

Hc,avg.   □   Lower limit   △   Upper limit   ▽
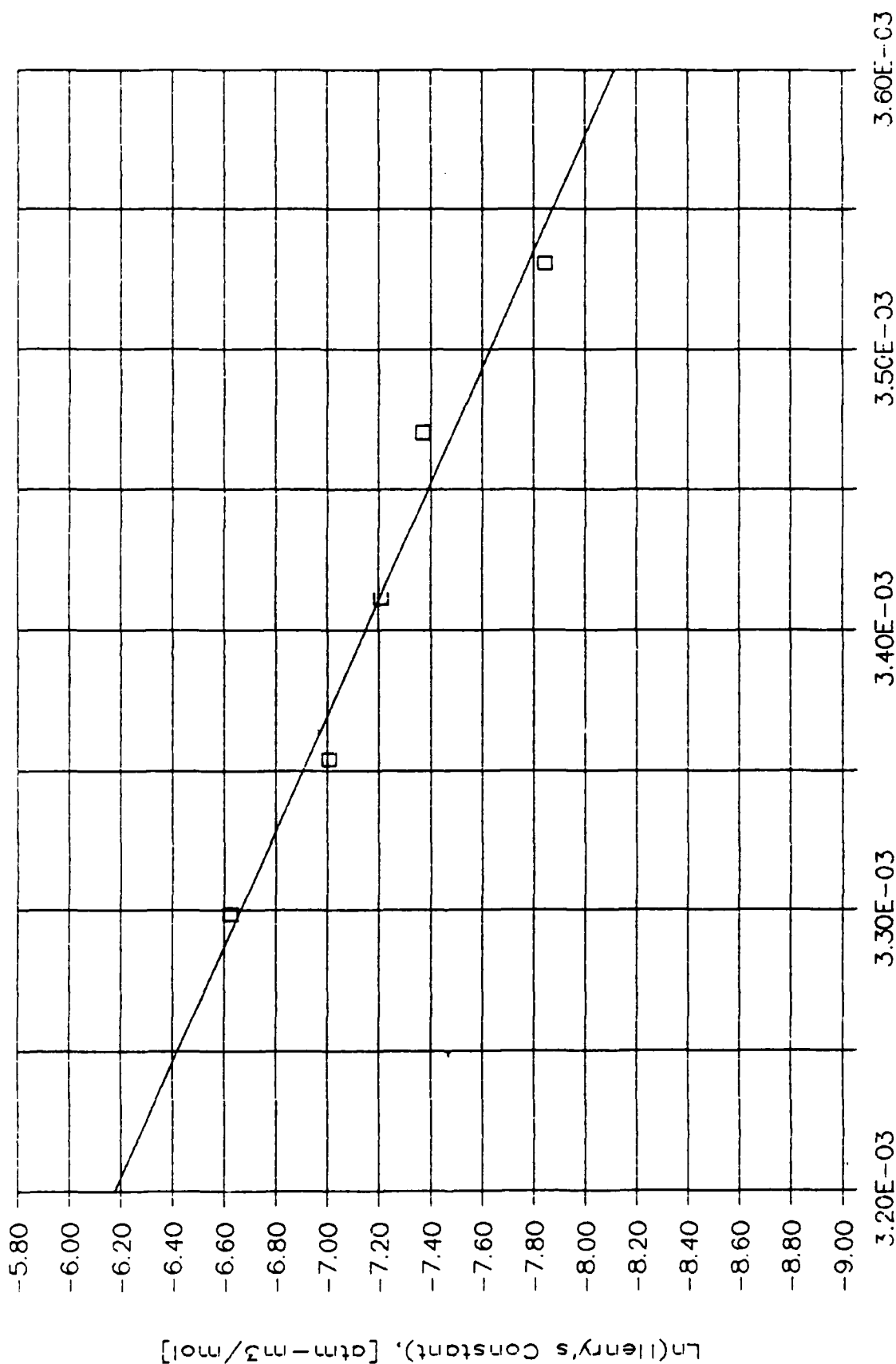
REGRESSION CONFIDENCE TEST

Component 121, 95% Confidence
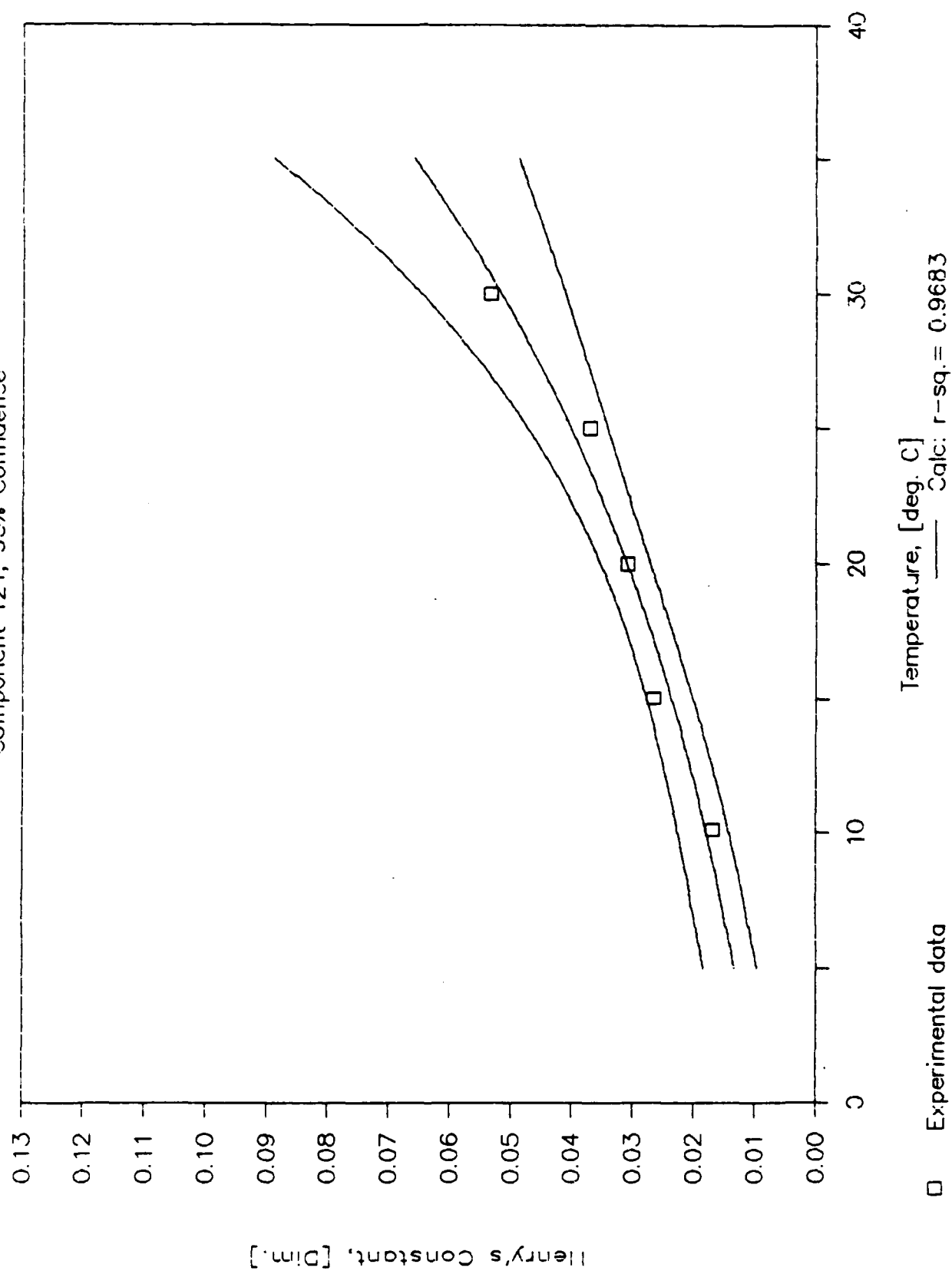
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.9683

□   Experimental data

	Temperature 1		Temperature 2		Temperature 3		
RUN Number ——)	2		2		3		
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	
Group No.	6		6		6		
Component ID	22		22		22		
Temperature (C)	9.9		15		20.1		
Low Vol (ml)	25		25		25		
High Vol (ml)	205		205		205		
System Vol (ml)	250		250		250		
H,avg: atm-m3/m3	0.1164	1.0E-25	0.1379	1.0E-25	0.1494	1.0E-25	
H,avg:atm-mol/mol	150.1		181.0		199.6		
H,avg: atm-m3/mol	2.70E-03	1	3.26E-03	1	3.60E-03	1	
H,avg: kPa-m3/mol	0.2740		0.3304		0.3643		
COV, r [std/mean]	3.86		4.26		0.17		
COV, both replic.	———		———		———		
Observation: (1)	0.1139		0.1452		0.1497		
[atm-m3/m3] (2)	0.1214		0.1379		0.1493		
(3)	0.1115		0.1378		0.1495		
(4)	0.1189		0.1308		0.1491		
Injection: (1)	976550		1158800		1321600		
[Peak Area] (2)	966690		1127300		1320600		
(3)	4052500		4251200		4768600		
(4)	3929000		4368500		4775300		

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		Temperature 4		Temperature 5	
RUN Number ⟶		3		3	
REPLICATE ⟶		No. 1	No. 2	No. 1	No. 2
Group No.		6		6	
Component ID		22		22	
Temperature (C)		25		29.9	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.1858	1.0E-25	0.2311	1.0E-25
H, avg: atm-mol/mol		252.3		319.0	
H, avg: atm-m3/mol		4.54E-03	1	5.75E-03	1
H, avg: kPa-m3/mol		0.4605		0.5823	
COV, r [std/mean]		4.00		6.32	
COV, both replic.		——		——	
Observation:	(1)	0.1923		0.2460	
[atm-m3/m3]	(2)	0.1794		0.2418	
	(3)	0.1921		0.2210	
	(4)	0.1792		0.2164	
Injection:	(1)	1689000		2262600	
[Peak Area]	(2)	1688500		2115000	
	(3)	5288300		6004400	
	(4)	5507600		6164000	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.1E+03
Y-INTERCEPT	=	5.2E+00
R-SQUARED	=	0.9735

TEMPERATURE REGRESSION PLOT

Component 22
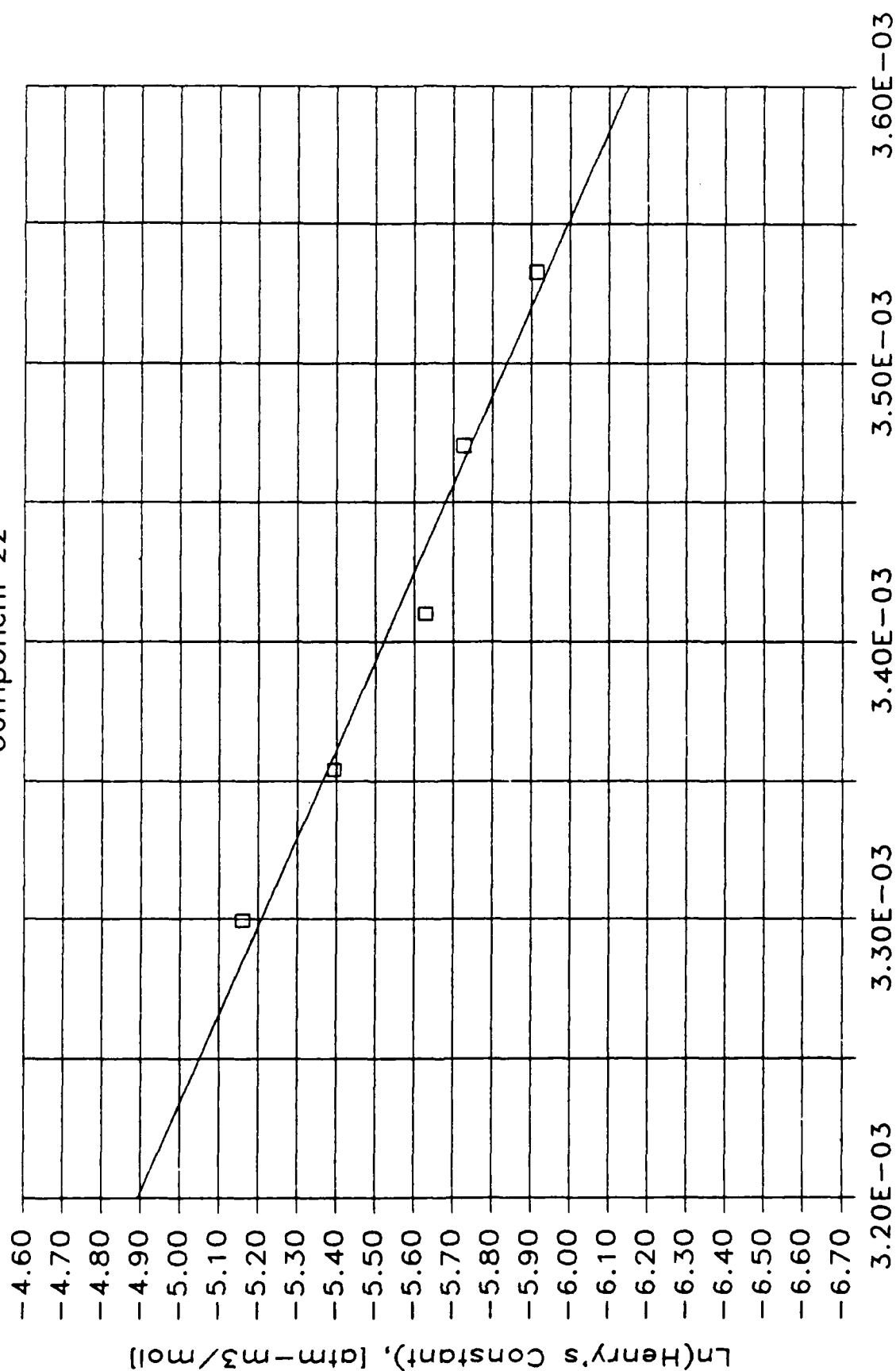
y-axis: Ln(Henry's Constant), [atm-m3/mol]

x-axis: Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9735

95% CONFIDENCE TEST
Component 22

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit
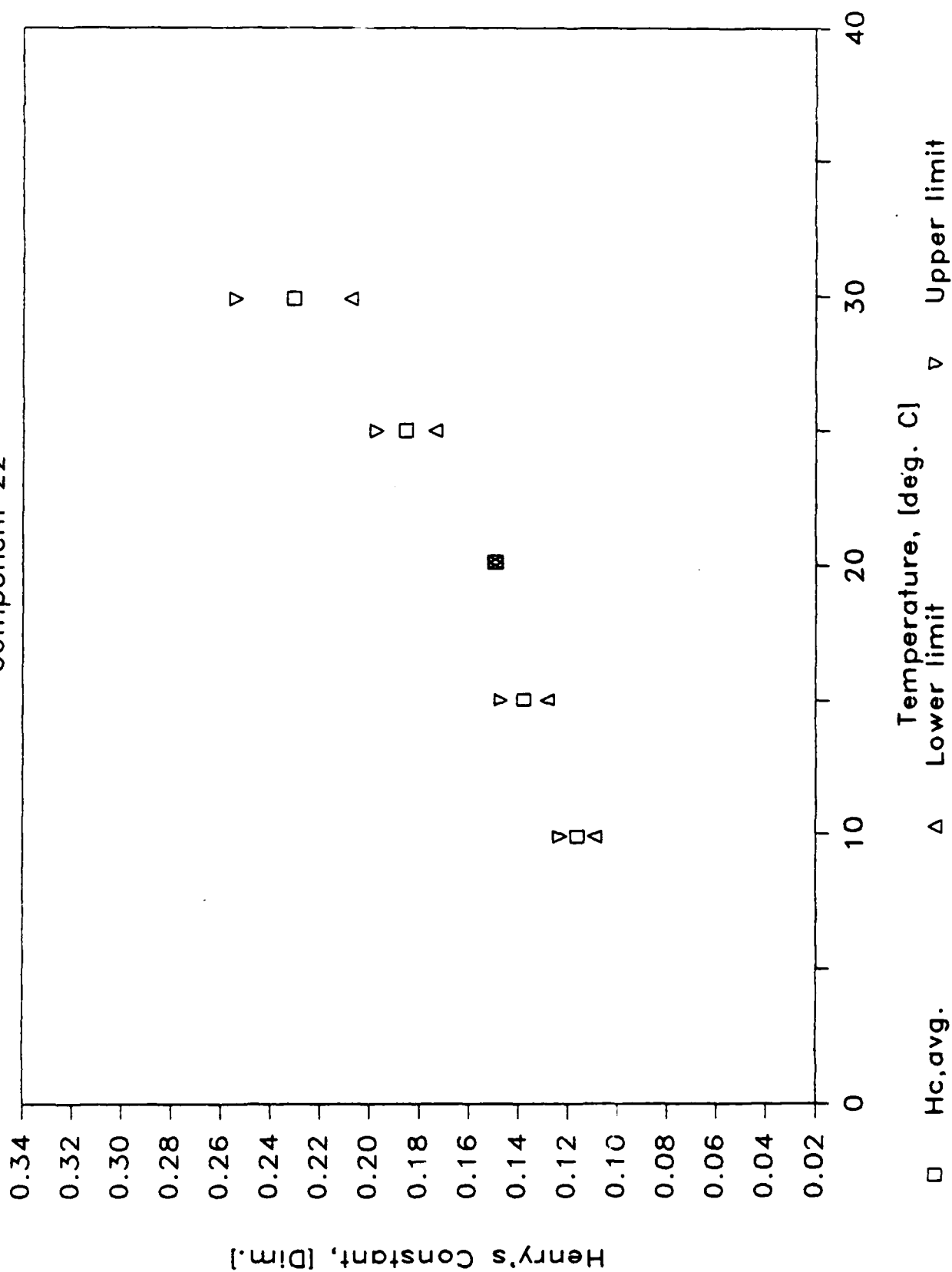
REGRESSION CONFIDENCE TEST

Component 22, 95% Confidence
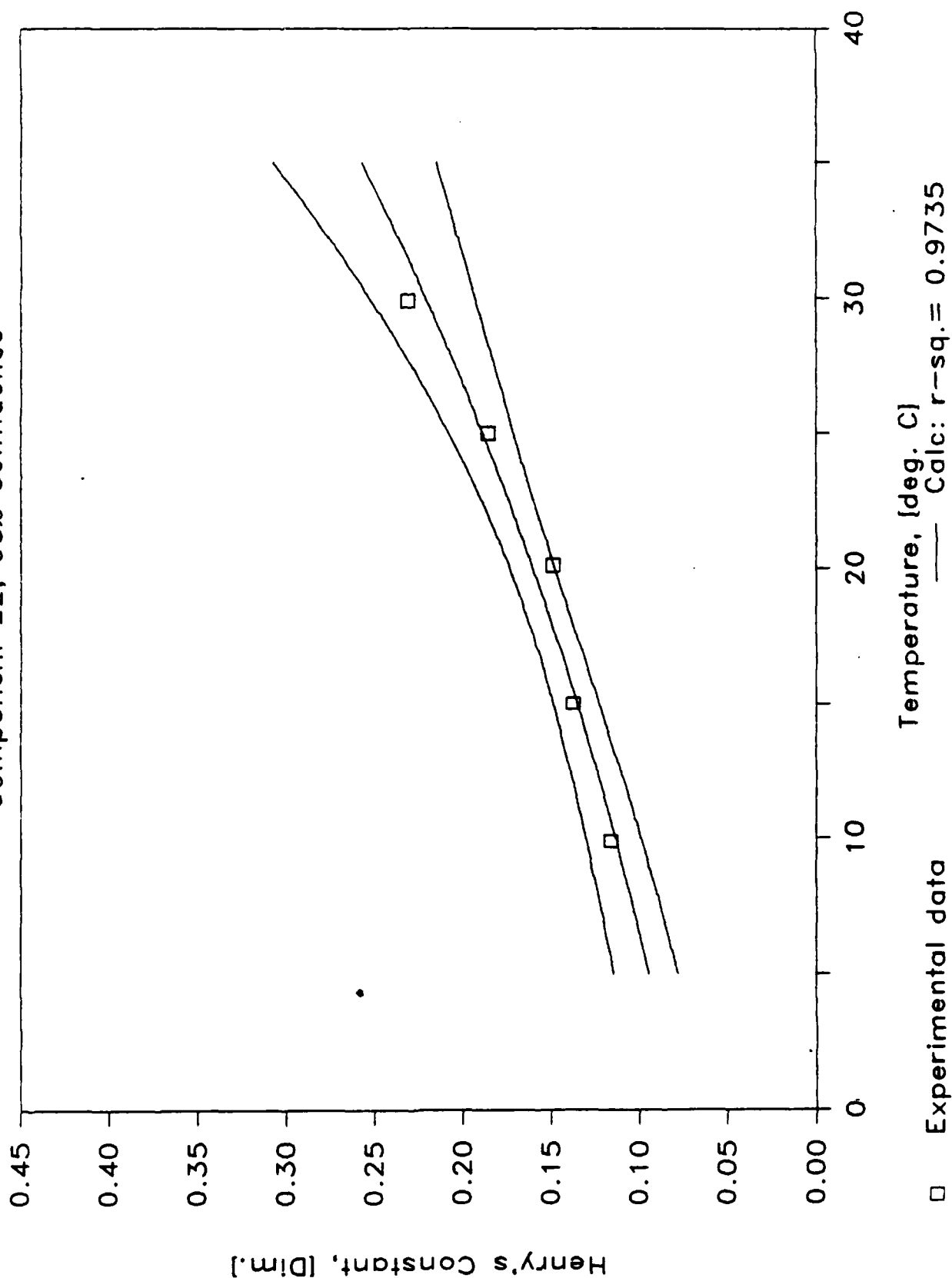
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

Calc: r-sq.= 0.9735

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ⎯⎯⟩	6		6		7	
REPLICATE ⎯⎯⟩	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	6		6		6	
Component ID	23		23		23	
Temperature (C)	9.9		15		20.1	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.2547	1.0E-25	0.2980	1.0E-25	0.3559	1.0E-25
H,avg:atm-mol/mol	328.4		391.1		475.4	
H,avg: atm-m3/mol	5.92E-03	1	7.05E-03	1	8.57E-03	1
H,avg: kPa-m3/mol	0.5995		0.7140		0.8679	
COV, r [std/mean]	5.24		0.79		4.48	
COV, both replic.	⎯⎯⎯		⎯⎯⎯		⎯⎯⎯	
Observation: (1)	0.2695		0.2991		0.3755	
[atm-m3/m3] (2)	0.2619		0.3007		0.3585	
(3)	0.2473		0.2953		0.3529	
(4)	0.2402		0.2970		0.3368	
Injection: (1)	2123400		2451600		2964300	
[Peak Area] (2)	2009000		2431100		2839900	
(3)	5383700		5803300		6008200	
(4)	5484600		5781800		6203300	

		Temperature 4			Temperature 5		
RUN Number —)		7			7		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2	
Group No.		6			6		
Component ID		23			23		
Temperature (C)		25			29.9		
Low Vol (ml)		25			25		
High Vol (ml)		205			205		
System Vol (ml)		250			250		
H,avg: atm-m3/m3		0.3862	1.0E-25		0.4879	1.0E-25	
H,avg:atm-mol/mol		524.5			673.4		
H,avg: atm-m3/mol		9.45E-03	1		1.21E-02	1	
H,avg: kPa-m3/mol		0.9575			1.2293		
COV, r [std/mean]		1.30			2.82		
COV, both replic.		——			——		
Observation:	(1)	0.3921			0.4712		
[atm-m3/m3]	(2)	0.3881			0.4861		
	(3)	0.3843			0.4894		
	(4)	0.3804			0.5048		
Injection:	(1)	3506400			4200800		
[Peak Area]	(2)	3457500			4324500		
	(3)	6895400			7266300		
	(4)	6944200			7106100		

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.0E+03
Y-INTERCEPT	=	5.3E+00
R-SQUARED	=	0.9854

TEMPERATURE REGRESSION PLOT

Component 23
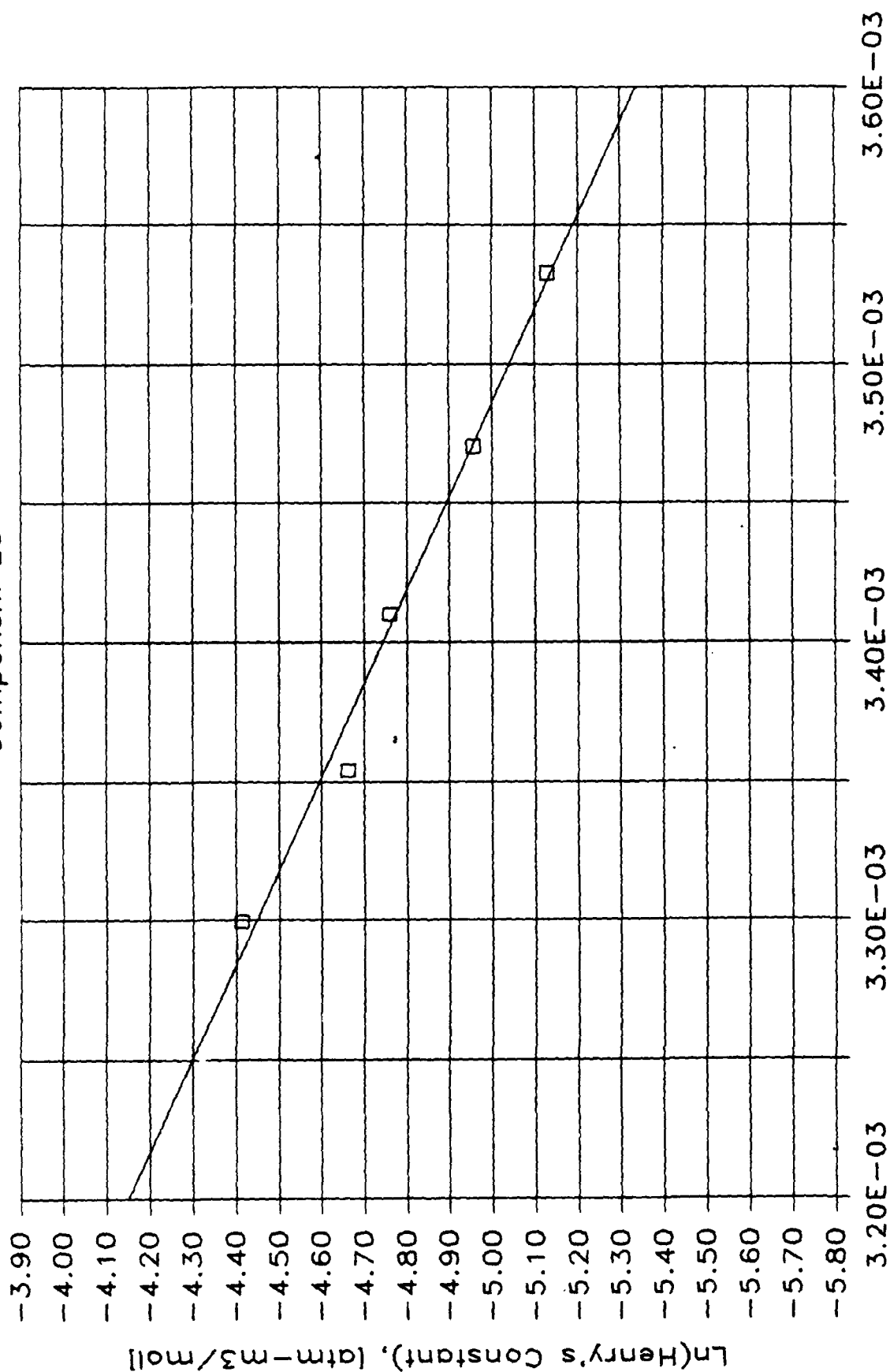
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data
—— Regr: r-sq.= 0.9854

95% CONFIDENCE TEST

Component 23

Henry's Constant, [Dim.]

Temperature, [deg. C]

Hc,avg.   Lower limit   Upper limit

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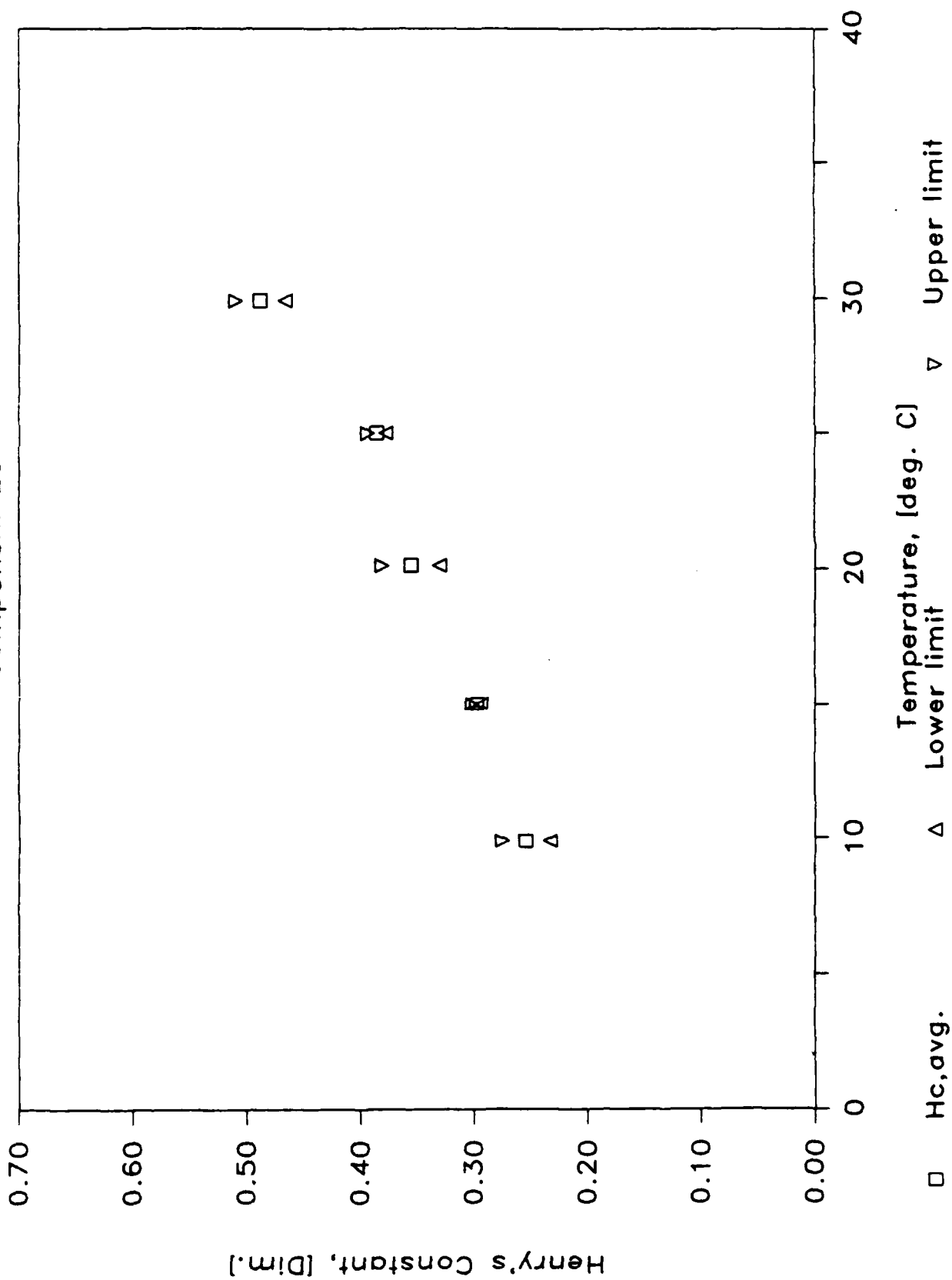
REGRESSION CONFIDENCE TEST

Component 23, 95% Confidence
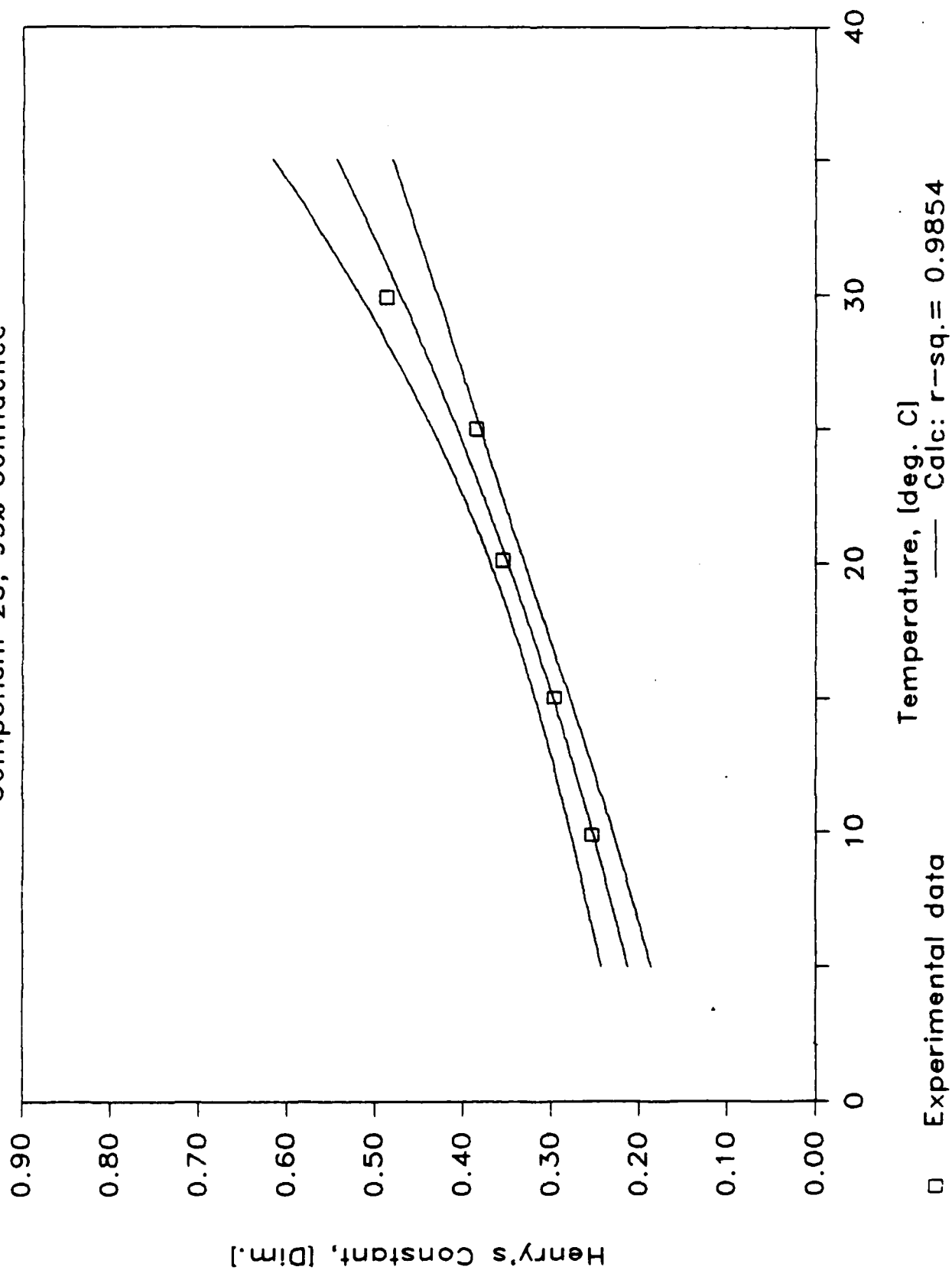
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.9854

□ Experimental data

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ----)		10		10		11	
REPLICATE ----)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		6		6		6	
Component ID		24		24		24	
Temperature (C)		9.9		15		20.1	
Low Vol (ml)		25		25		25	
High Vol (ml)		205		205		205	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.3644	1.0E-25	0.4702	1.0E-25	0.5840	1.0E-25
H, avg: atm-mol/mol		469.8		617.1		780.0	
H, avg: atm-m3/mol		8.46E-03	1	1.11E-02	1	1.41E-02	1
H, avg: kPa-m3/mol		0.8576		1.1266		1.4239	
COV, r [std/mean]		4.19		4.99		1.52	
COV, both replic.		------		------		------	
Observation:	(1)	0.3713		0.4922		0.5829	
[atm-m3/m3]	(2)	0.3819		0.4887		0.5949	
	(3)	0.3472		0.4516		0.5732	
	(4)	0.3573		0.4483		0.5849	
Injection:	(1)	582400		973110		1192400	
[Peak Area]	(2)	556140		914900		1177900	
	(3)	1189800		1628300		1765700	
	(4)	1166700		1636700		1739800	

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		Temperature 4		Temperature 5	
RUN Number —)		11		11	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		6		6	
Component ID		24		24	
Temperature (C)		25		29.9	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.6970	1.0E-25	0.9839	1.0E-25
H, avg: atm-mol/mol		946.5		1358.1	
H, avg: atm-m3/mol		1.71E-02	1	2.45E-02	1
H, avg: kPa-m3/mol		1.7278		2.4793	
COV, r [std/mean]		1.65		4.04	
COV, both replic.		——		——	
Observation:	(1)	0.6973		1.0259	
[atm-m3/m3]	(2)	0.7112		0.9584	
	(3)	0.6829		1.0088	
	(4)	0.6965		0.9425	
Injection:	(1)	1107000		1129300	
[Peak Area]	(2)	1090300		1115700	
	(3)	1438600		1108700	
	(4)	1418100		1164400	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-4.4E+03
Y-INTERCEPT	=	1.1E+01
R-SQUARED	=	0.9872

TEMPERATURE REGRESSION PLOT
Component 24

Ln(Henry's Constant), [atm−m3/mol]

Reciprocal Temperature, [1/K]
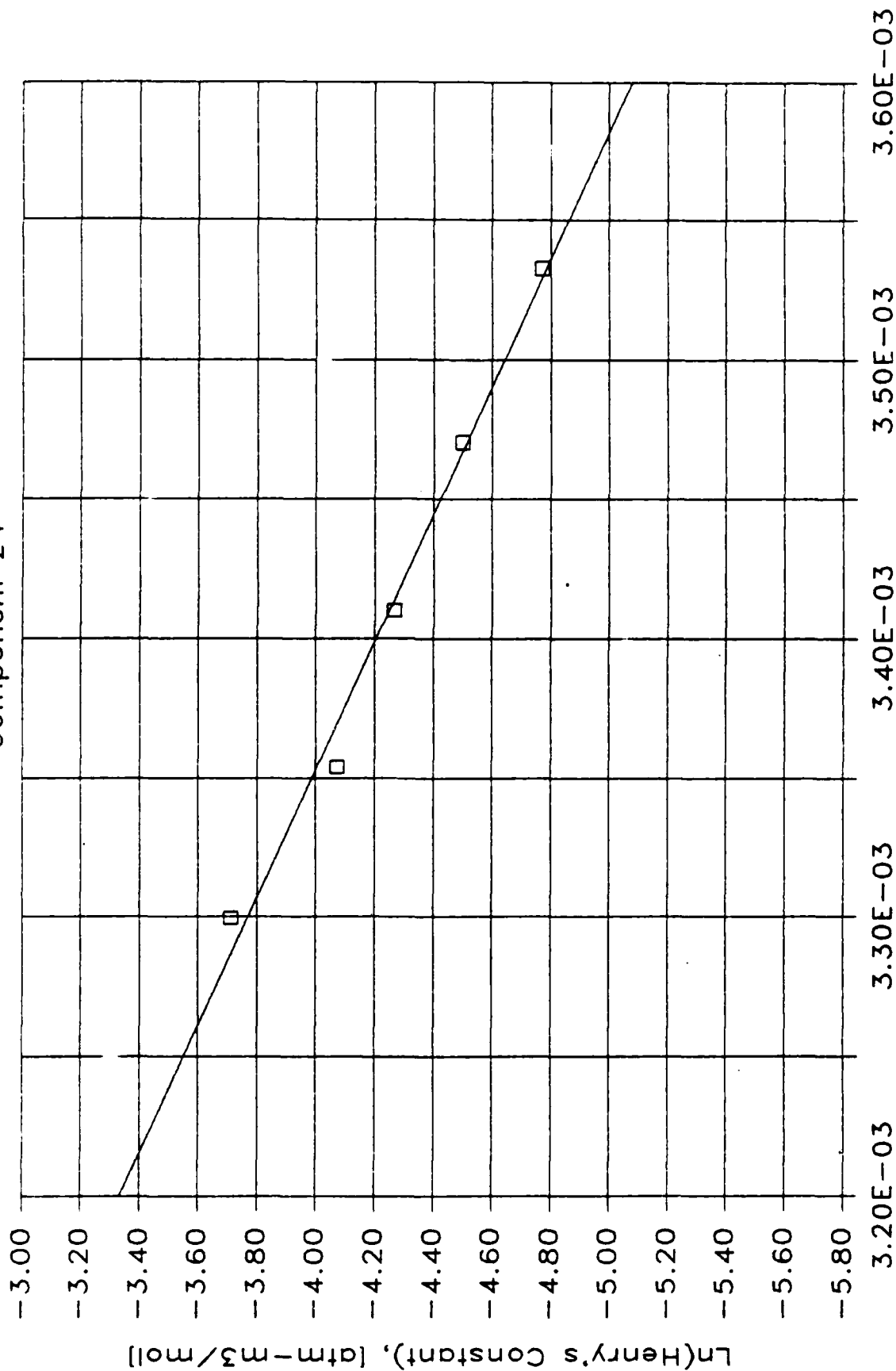
□ Experimental data
—— Regr: r−sq.= 0.9872

95% CONFIDENCE TEST

Component 24

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
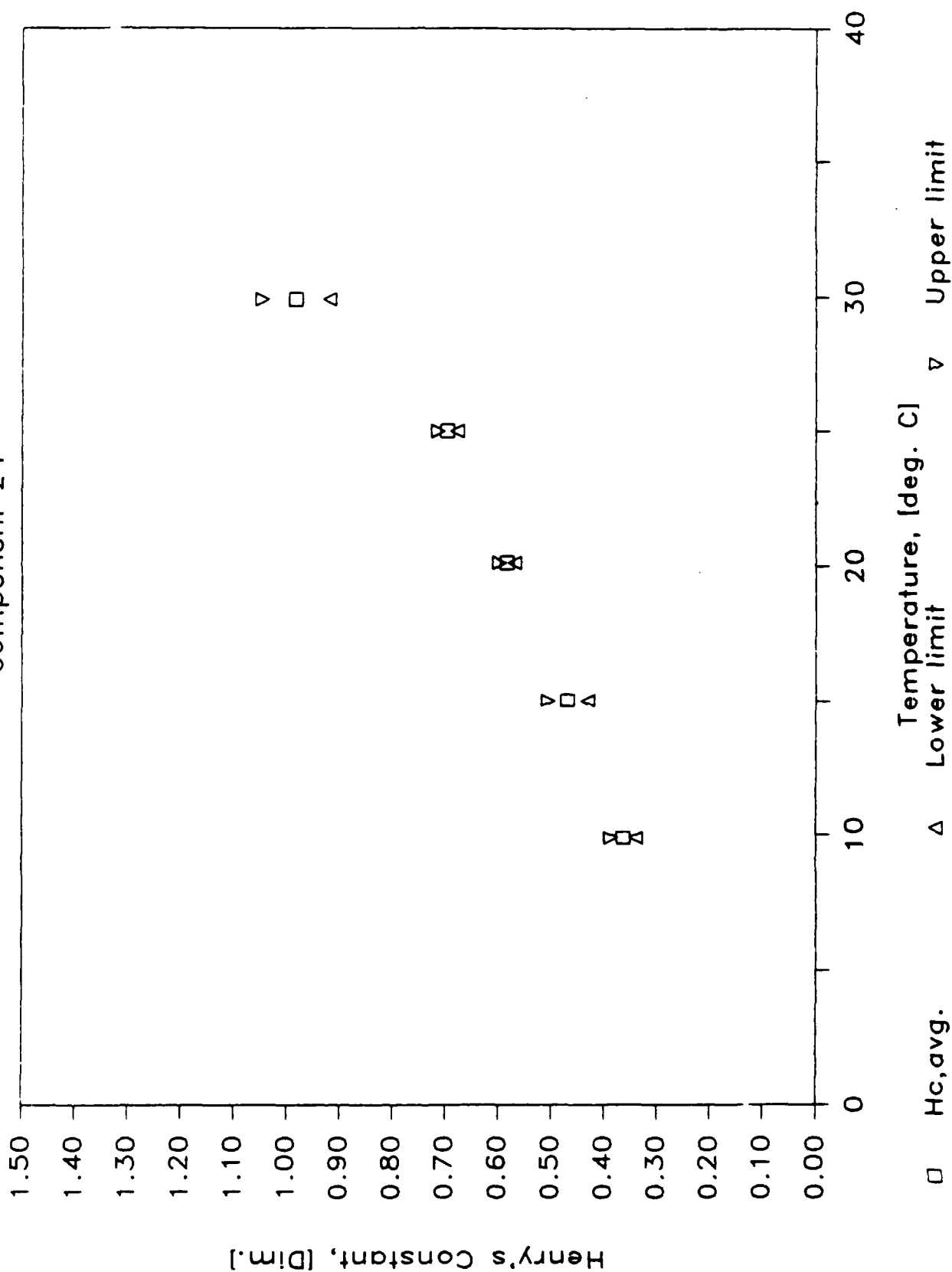
REGRESSION CONFIDENCE TEST

Component 24, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.9872

□ Experimental data

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	I	14	I	14	I	15	I
REPLICATE ---)	I	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	I	6		6		6	
Component ID	I	25		25		25	
Temperature (C)	I	9.9		15		20.1	
Low Vol (ml)	I	25		25		25	
High Vol (ml)	I	205		205		205	
System Vol (ml)	I	250		250		250	
H,avg: atm-m3/m3	I	0.2317	1.0E-25	0.2823	1.0E-25	0.3498	1.0E-25
H,avg:atm-mol/mol	I	298.7		370.5		467.2	
H,avg: atm-m3/mol	I	5.38E-03	1	6.68E-03	1	8.42E-03	1
H,avg: kPa-m3/mol	I	0.5452		0.6763		0.8530	
COV, r [std/mean]	I	3.85		4.41		3.72	
COV, both replic.	I	----		----		----	
Observation: (1)	I	0.2290		0.2796		0.3579	
[atm-m3/m3] (2)	I	0.2424		0.2975		0.3636	
(3)	I	0.2211		0.2674		0.3362	
(4)	I	0.2342		0.2847		0.3416	
Injection: (1)	I	210770		296900		375060	
[Peak Area] (2)	I	206250		288350		359280	
(3)	I	593030		734820		785850	
(4)	I	572190		705270		777310	

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		Temperature 4			Temperature 5		
RUN Number —)		15			15		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2	
Group No.		6			6		
Component ID		25			25		
Temperature (C)		25			29.9		
Low Vol (ml)		25			25		
High Vol (ml)		205			205		
System Vol (ml)		250			250		
H,avg: atm-m3/m3		0.4149	1.0E-25		0.5164	1.0E-25	
H,avg:atm-mol/mol		563.5			712.8		
H,avg: atm-m3/mol		1.02E-02	1		1.28E-02	1	
H,avg: kPa-m3/mol		1.0286			1.3011		
COV, r [std/mean]		1.25			1.84		
COV, both replic.		——			——		
Observation: (1)		0.4182			0.5278		
[atm-m3/m3] (2)		0.4203			0.5184		
(3)		0.4095			0.5142		
(4)		0.4116			0.5050		
Injection: (1)		398990			463500		
[Peak Area] (2)		393110			454810		
(3)		749820			737510		
(4)		747130			747140		

Temperature Regression Parameters:

$$\# \text{ OF POINTS} \quad = \quad 5$$

$$\text{SLOPE} \quad = \quad -3.7E+03$$

$$\text{Y-INTERCEPT} \quad = \quad 7.8E+00$$

$$\text{R-SQUARED} \quad = \quad 0.9984$$

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TEMPERATURE REGRESSION PLOT

Component 25

Ln(Henry's Constant), [atm–m3/mol]
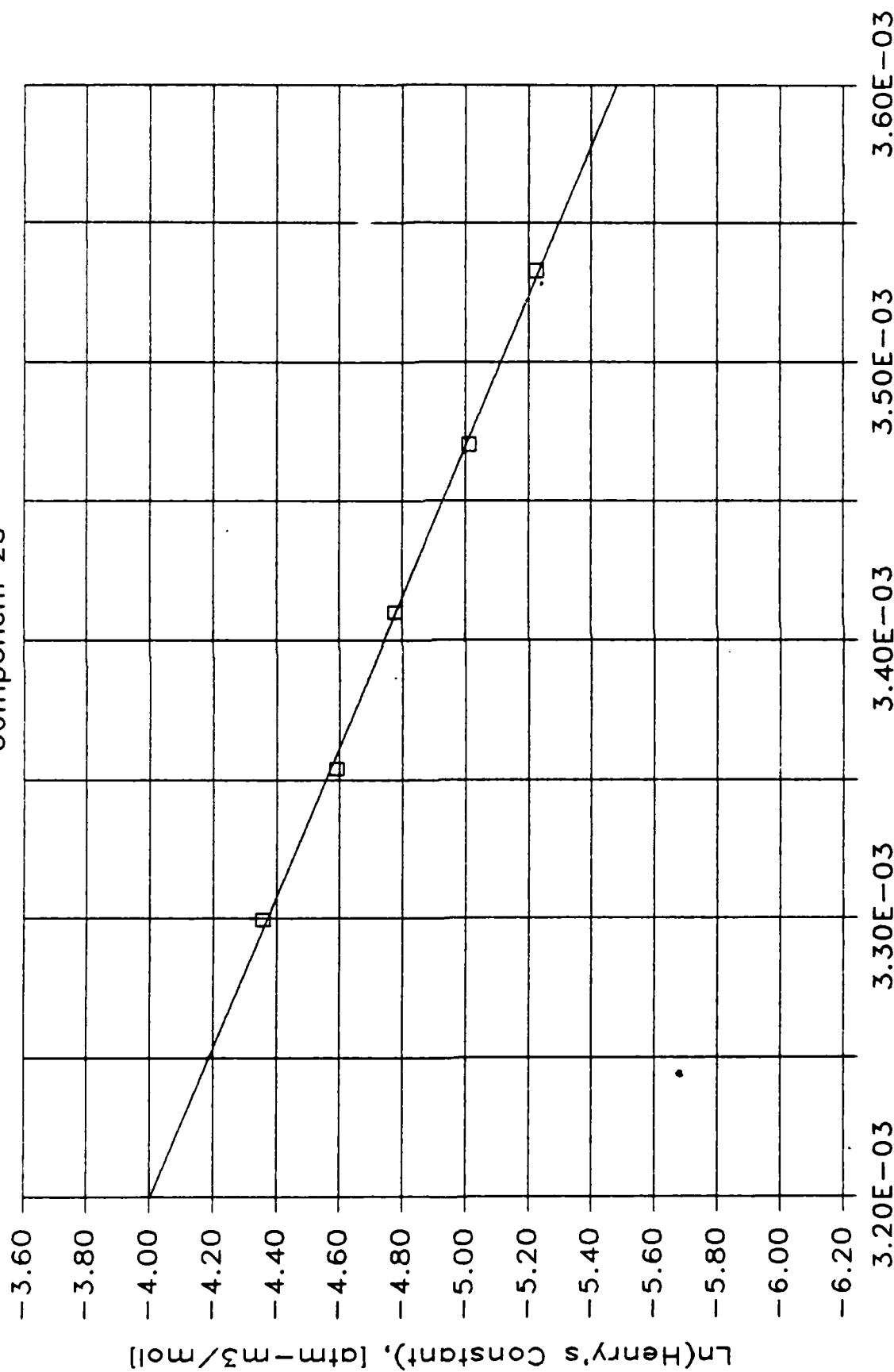
Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r–sq.= 0.9984

95% CONFIDENCE TEST

Component 25

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

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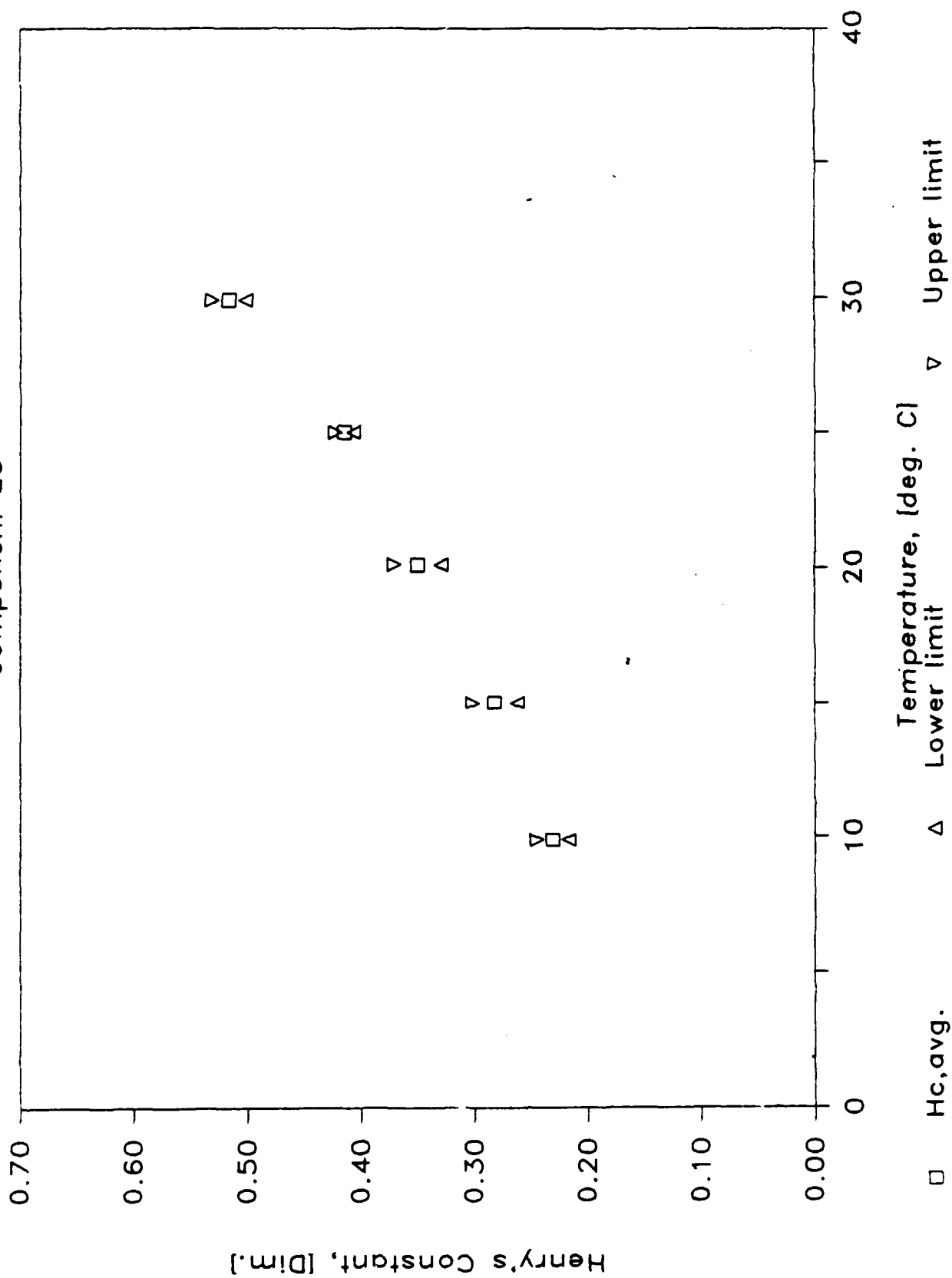
REGRESSION CONFIDENCE TEST

Component 25, 95% Confidence
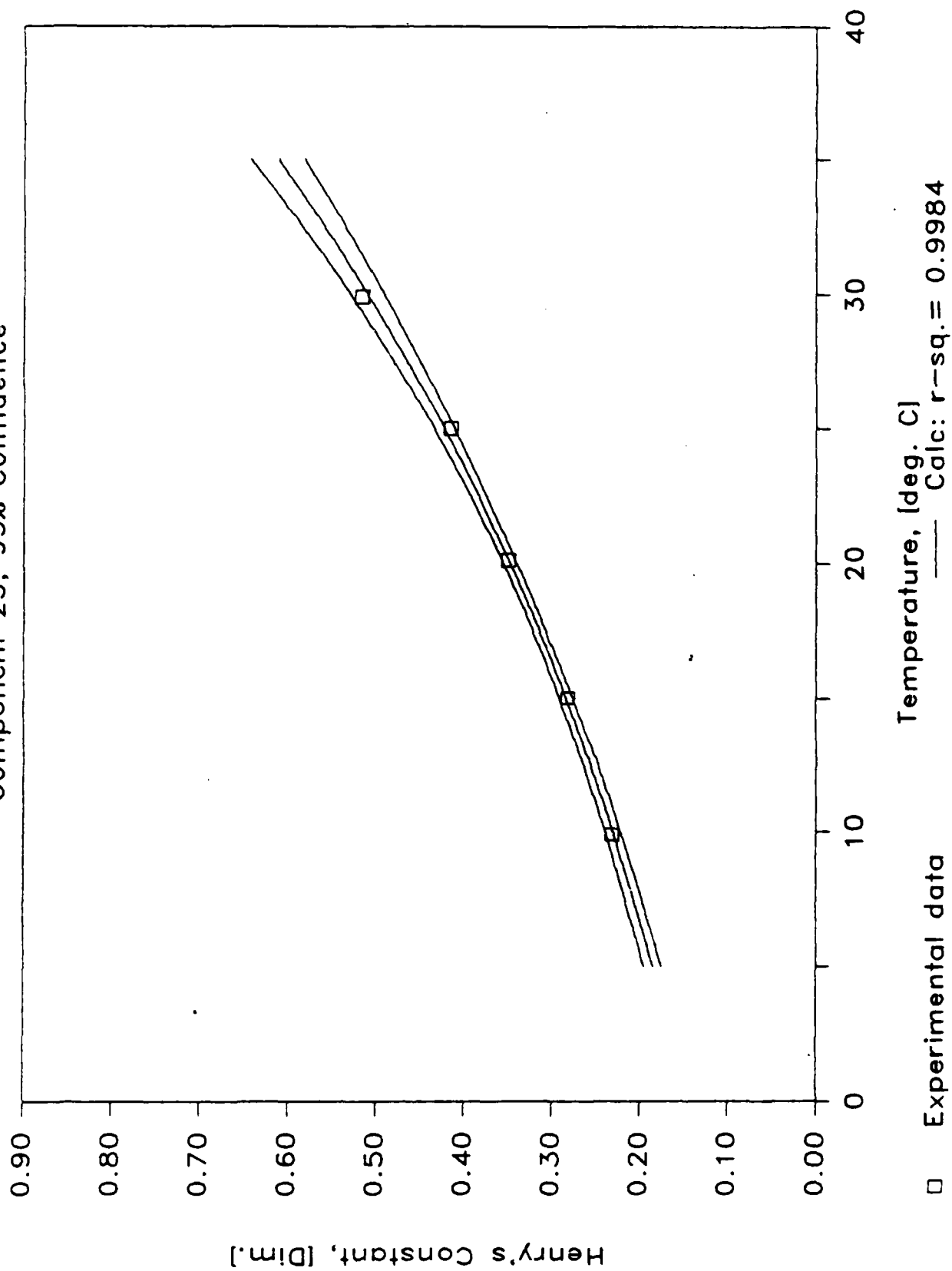
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r—sq.= 0.9984

		Temperature 1			Temperature 2			Temperature 3		
RUN Number ——)		8			1			2		
REPLICATE ——)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		7			7			7		
Component ID		26			26			26		
Temperature (C)		10			14.9			20.2		
Low Vol (ml)		30			30			30		
High Vol (ml)		210			210			210		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.1105	1.0E-25		0.0125	1.0E-25		0.0258	1.0E-25	
H, avg: atm-mol/mol		142.5			16.3			34.5		
H, avg: atm-m3/mol		2.57E-03	1		2.94E-04	1		6.21E-04	1	
H, avg: kPa-m3/mol		0.2601			0.0298			0.0629		
COV, r [std/mean]		38.57			74.63			12.93		
COV, both replic.		———			———			———		
Observation: (1)		0.1514			0.0095			0.0298		
[atm-m3/m3] (2)		0.1430			0.0237			0.0266		
(3)		0.0769			0.0016			0.0249		
(4)		0.0707			0.0150			0.0218		
Injection: (1)		60315			41886			53285		
[Peak Area] (2)		45313			39680			51772		
(3)		205820			274600			307810		
(4)		211730			250920			313720		

		Temperature 4		Temperature 5	
RUN Number —)		9		1	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		7		7	
Component ID		26		26	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0494	1.0E-25	0.0327	1.0E-25
H, avg:atm-mol/mol		67.1		45.2	
H, avg: atm-m3/mol		1.21E-03	1	8.14E-04	1
H, avg: kPa-m3/mol		0.1225		0.0825	
COV, r [std/mean]		29.07		6.50	
COV, both replic.		———		———	
Observation:	(1)	0.0639		0.0352	
[atm-m3/m3]	(2)	0.0595		0.0336	
	(3)	0.0391		0.0319	
	(4)	0.0352		0.0303	
Injection:	(1)	91700		98912	
[Peak Area]	(2)	88707		97049	
	(3)	442400		554030	
	(4)	451930		559110	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	1.6E+03
Y-INTERCEPT	=	-1.3E+01
R-SQUARED	=	0.0339

TEMPERATURE REGRESSION PLOT

Component 26

Ln(Henry's Constant), [atm-m3/mol]
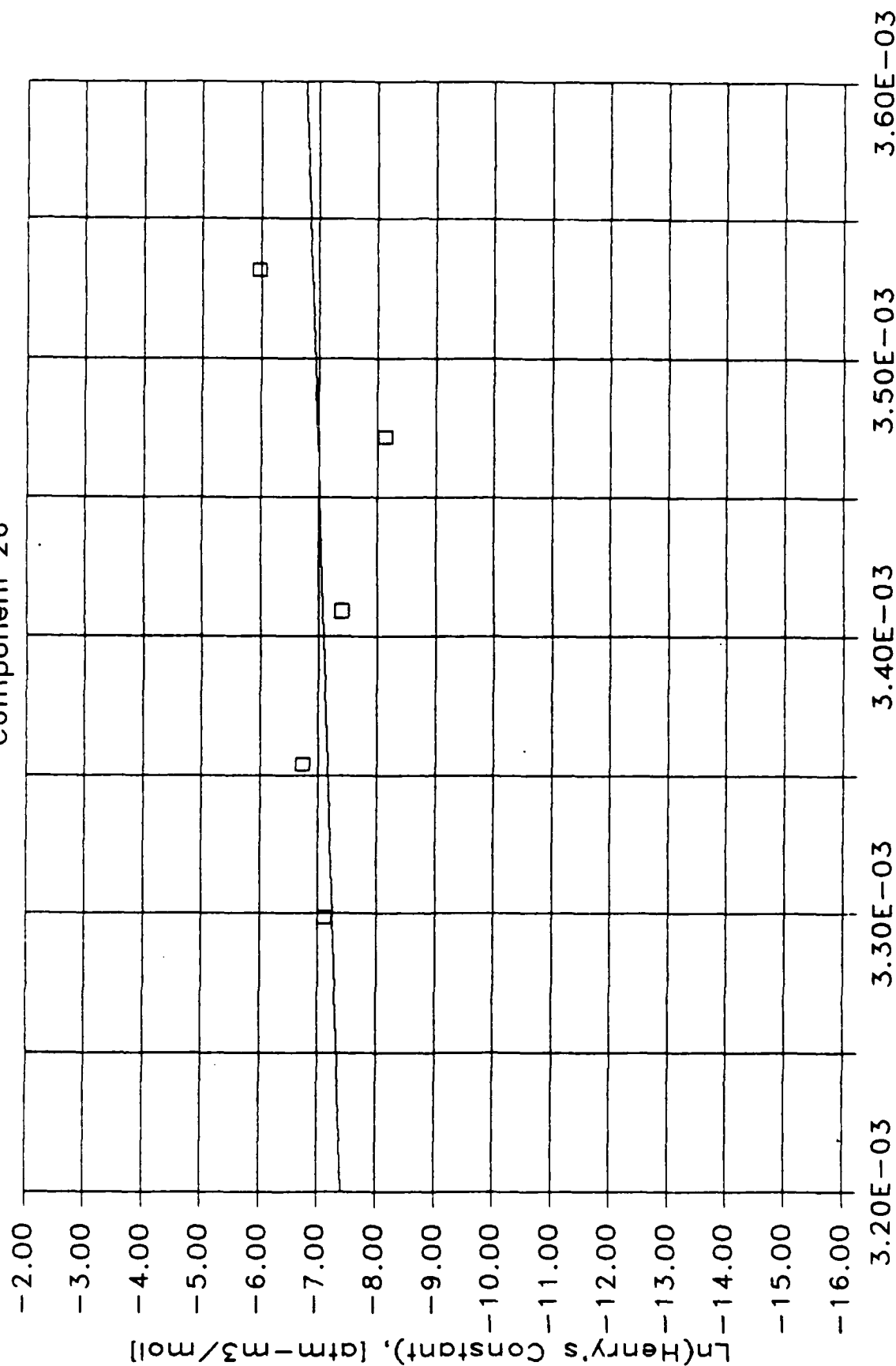
Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.0339

95% CONFIDENCE TEST

Component 26

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
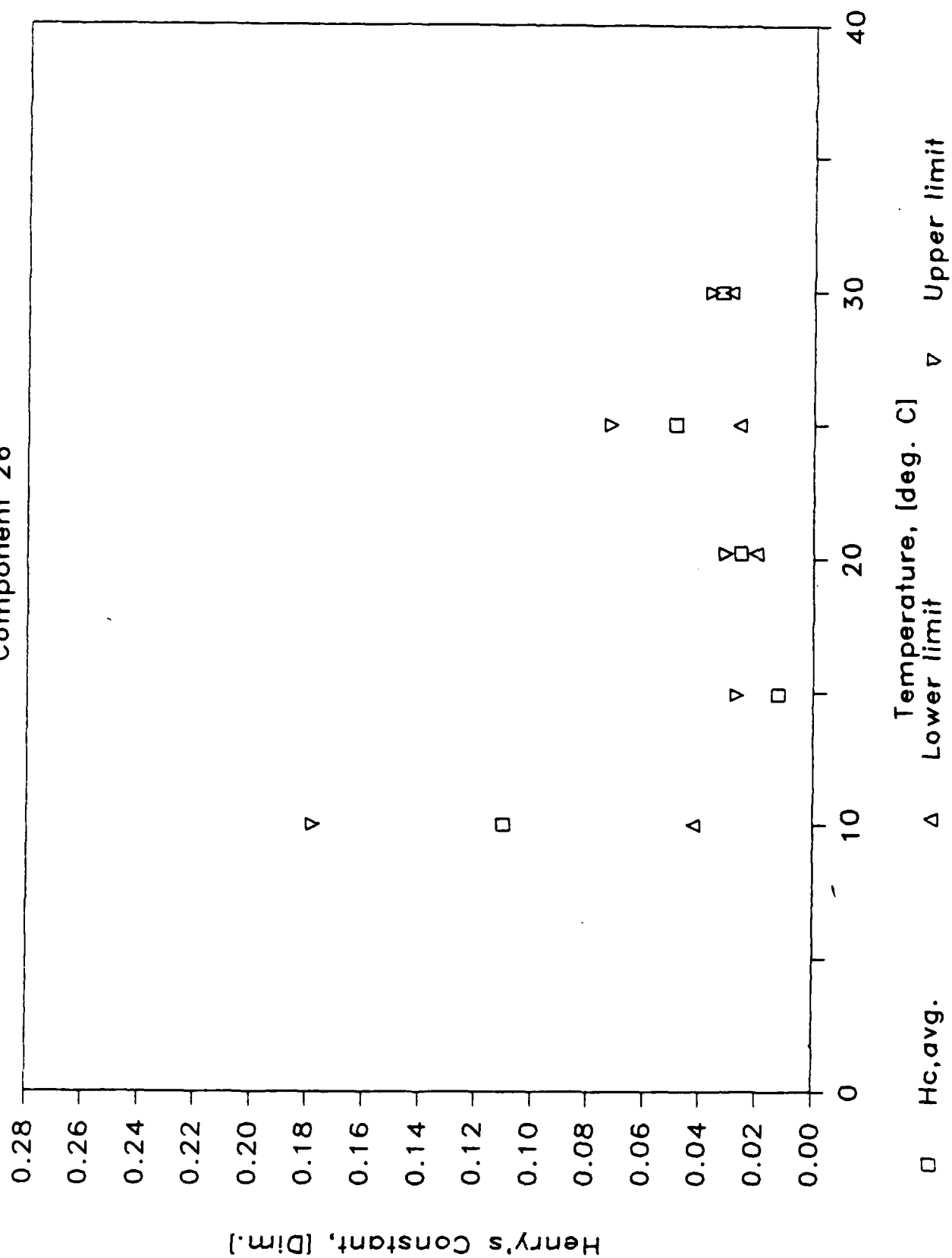
REGRESSION CONFIDENCE TEST

Component 26, 95% Confidence
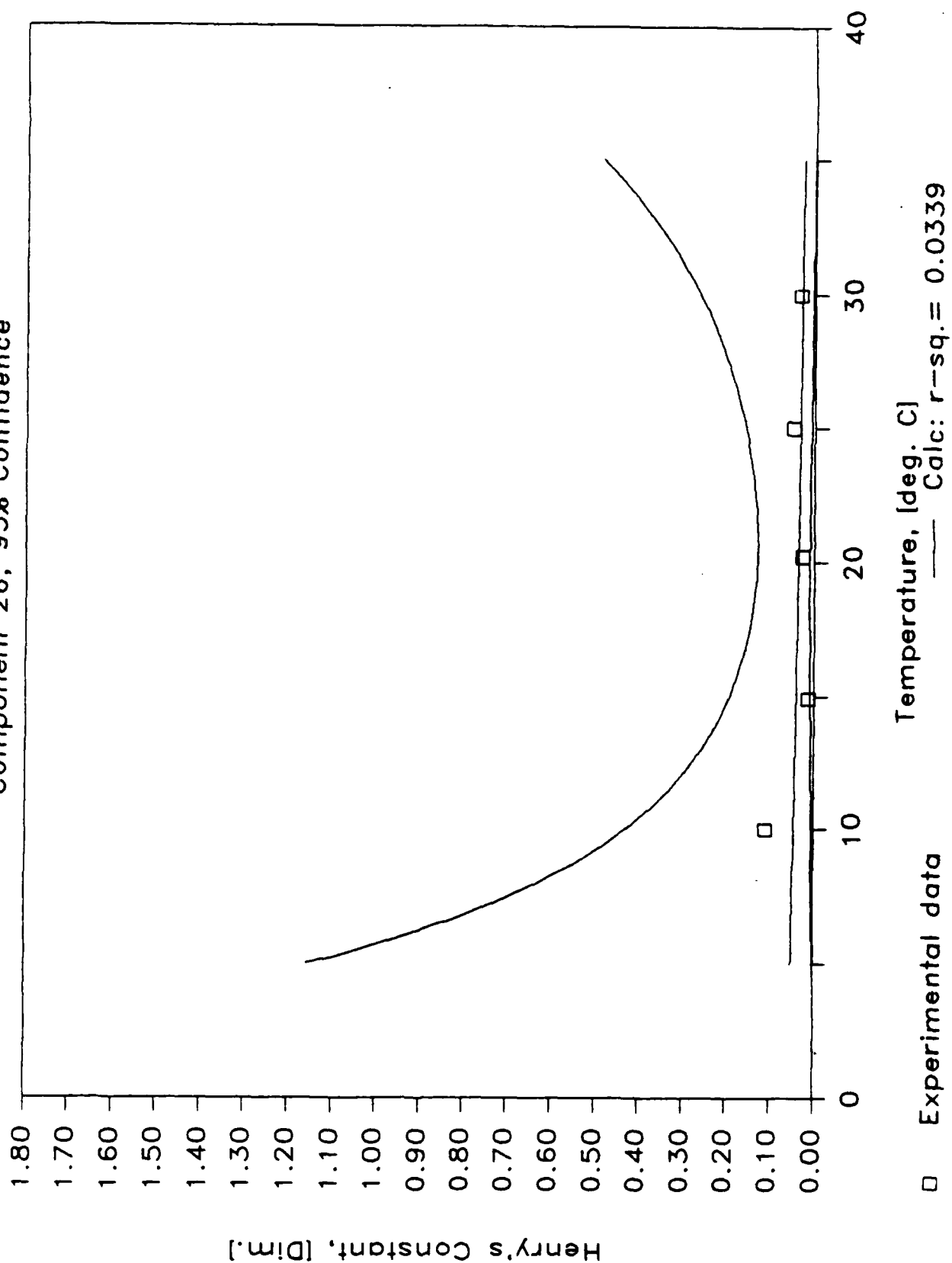
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

Calc: r-sq.= 0.0339

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)	12		5		6	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	7		7		7	
Component ID	27		27		27	
Temperature (C)	10		14.9		20.2	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.1399	1.0E-25	0.0724	1.0E-25	0.0800	1.0E-25
H,avg:atm-mol/mol	180.5		95.0		106.9	
H,avg: atm-m3/mol	3.25E-03	1	1.71E-03	1	1.93E-03	1
H,avg: kPa-m3/mol	0.3294		0.1734		0.1952	
COV, r [std/mean]	35.68		9.98		10.94	
COV, both replic.	———		———		———	
Observation: (1)	0.1736		0.0798		0.0868	
[atm-m3/m3] (2)	0.1914		0.0772		0.0883	
(3)	0.0910		0.0675		0.0718	
(4)	0.1038		0.0650		0.0732	
Injection: (1)	294410		250860		312060	
[Peak Area] (2)	219290		237090		291860	
(3)	936760		1124600		1356900	
(4)	888750		1137600		1348100	

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		Temperature 4			Temperature 5		
RUN Number ---)		13			5		
REPLICATE ---)		No. 1	No. 2		No. 1	No. 2	
Group No.		7			7		
Component ID		27			27		
Temperature (C)		25			30		
Low Vol (ml)		30			30		
High Vol (ml)		210			210		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		0.0688	1.0E-25		0.1072	1.0E-25	
H, avg: atm-mol/mol		93.5			148.0		
H, avg: atm-m3/mol		1.68E-03	1		2.67E-03	1	
H, avg: kPa-m3/mol		0.1706			0.2702		
COV, r [std/mean]		5.80			10.34		
COV, both replic.		------			------		
Observation: (1)		0.0713			0.1150		
[atm-m3/m3] (2)		0.0730			0.1183		
(3)		0.0646			0.0962		
(4)		0.0663			0.0993		
Injection: (1)		388130			591170		
[Peak Area] (2)		376150			548890		
(3)		1808500			2294500		
(4)		1793800			2265500		

Temperature Regression Parameters:

$\#$ OF POINTS   =   5

SLOPE   =   7.6E+02

Y-INTERCEPT   =   -8.7E+00

R-SQUARED   =   0.0580

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TEMPERATURE REGRESSION PLOT

Component 27
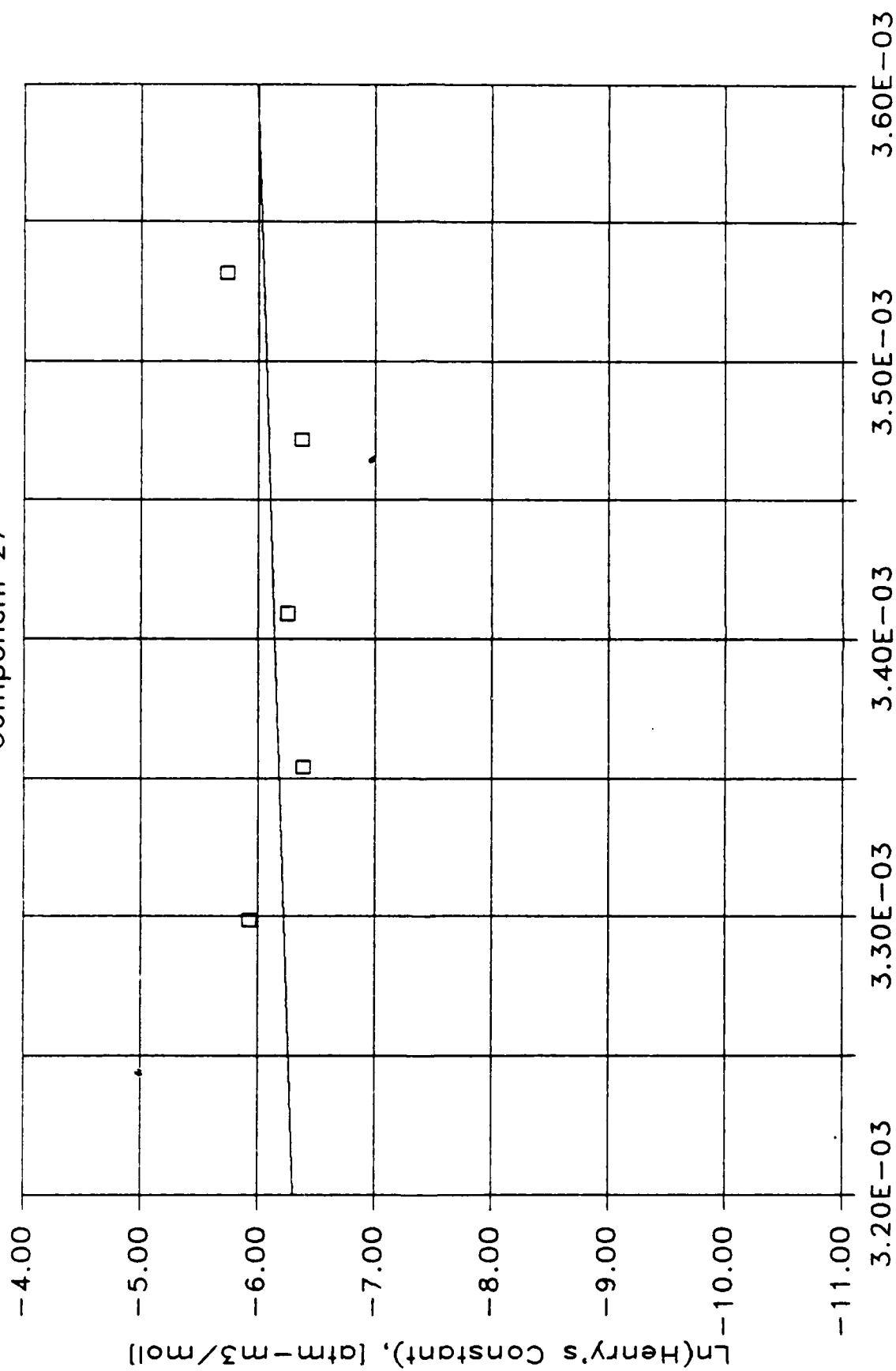
Experimental data

Regr: r-sq.= 0.058

Reciprocal Temperature, [1/K]

Ln(Henry's Constant), [atm-m3/mol]

95% CONFIDENCE TEST

Component 27

□ Hc.avg. △ Lower limit ▽ Upper limit
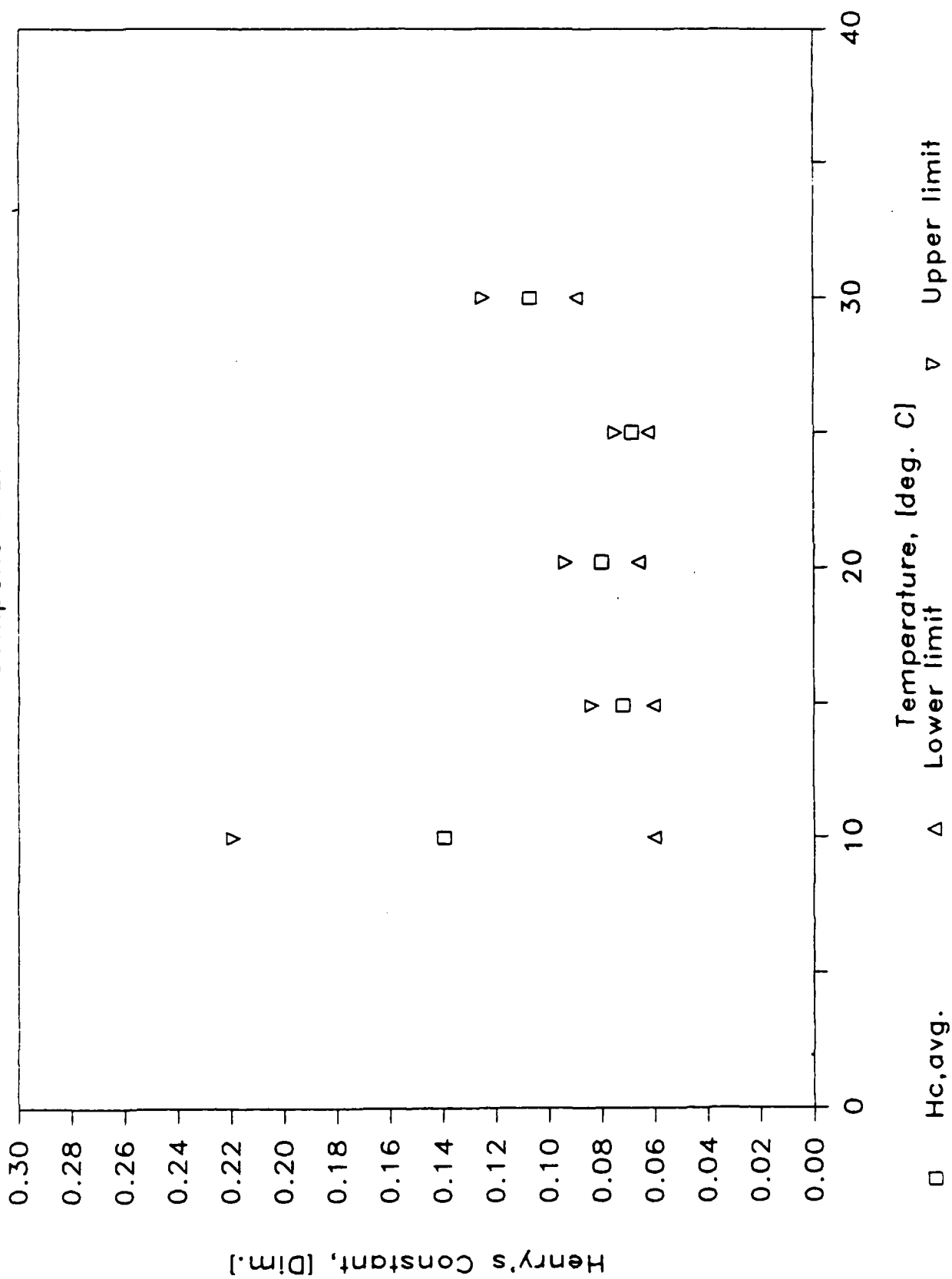
REGRESSION CONFIDENCE TEST

Component 27, 95% Confidence
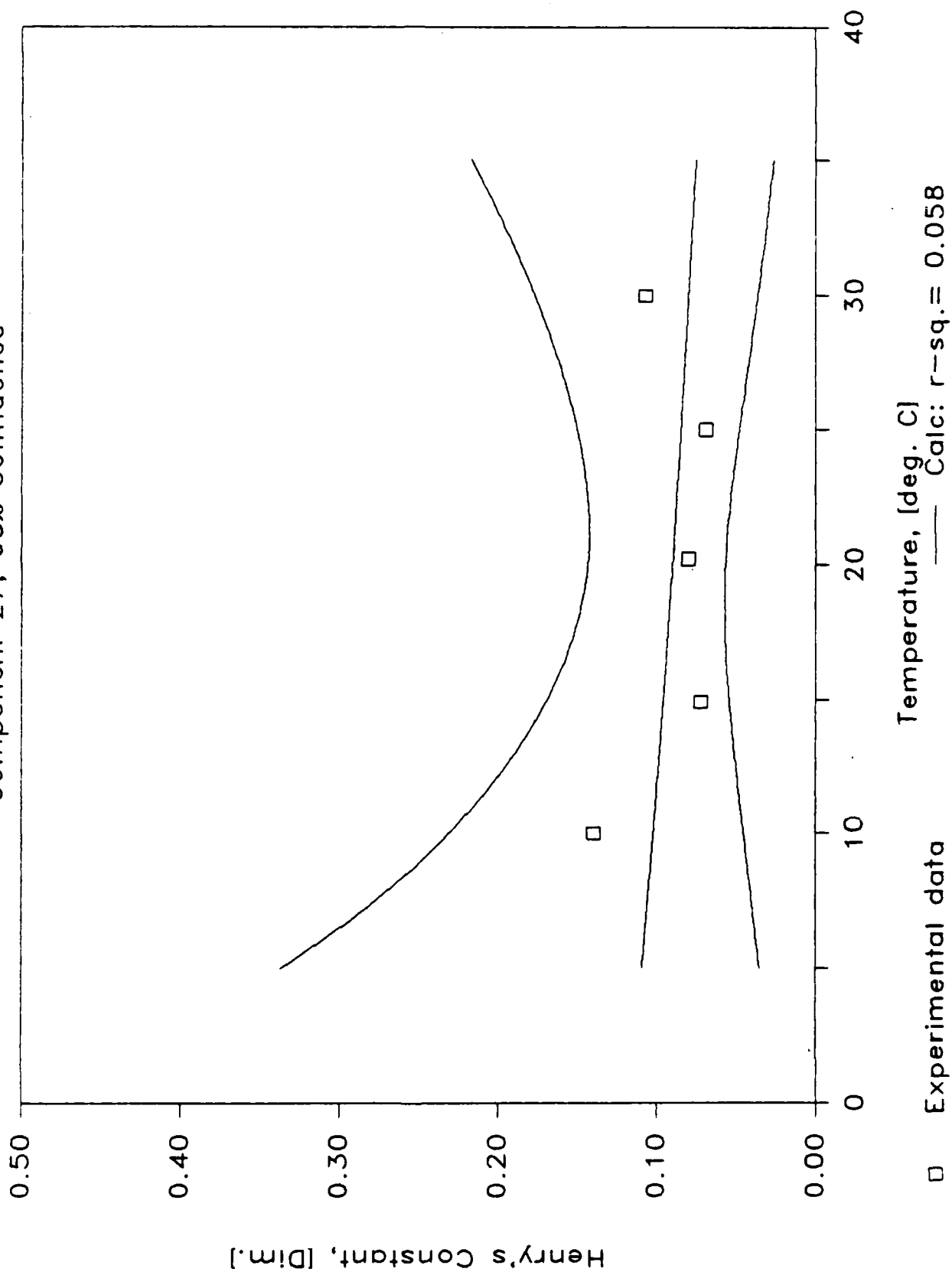
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.058

		Temperature 1			Temperature 2			Temperature 3		
RUN Number ——)		6			6			7		
REPLICATE ——)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		1			1			1		
Component ID		127			127			127		
Temperature (C)		10.1			15			20		
Low Vol (ml)		30			30			30		
High Vol (ml)		210			210			210		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.0321	1.0E-25		0.0445	1.0E-25		0.0563	1.0E-25	
H, avg: atm-mol/mol		41.5			58.4			75.2		
H, avg: atm-m3/mol		7.47E-04	1		1.05E-03	1		1.35E-03	1	
H, avg: kPa-m3/mol		0.0757			0.1066			0.1373		
COV, r [std/mean]		38.85			30.24			17.79		
COV, both replic.		———			———			———		
Observation:	(1)	0.0343			0.0568			0.0656		
[atm-m3/m3]	(2)	0.0476			0.0555			0.0643		
	(3)	0.0174			0.0334			0.0482		
	(4)	0.0293			0.0323			0.0471		
Injection:	(1)	385740			338690			411480		
[Peak Area]	(2)	348690			299060			377340		
	(3)	2171800			1692200			1969100		
	(4)	2020000			1703100			1981100		

		Temperature 4		Temperature 5	
RUN Number ---)		7		7	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		1		1	
Component ID		127		127	
Temperature (C)		25		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0763	1.0E-25	0.1078	1.0E-25
H, avg: atm-mol/mol		103.6		148.8	
H, avg: atm-m3/mol		1.87E-03	1	2.68E-03	1
H, avg: kPa-m3/mol		0.1891		0.2717	
COV, r [std/mean]		10.03		3.26	
COV, both replic.		------		------	
Observation:	(1)	0.0817		0.1073	
[atm-m3/m3]	(2)	0.0839		0.1035	
	(3)	0.0687		0.1121	
	(4)	0.0708		0.1082	
Injection:	(1)	547240		989510	
[Peak Area]	(2)	515850		1007900	
	(3)	2432400		3954900	
	(4)	2409100		4014900	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-5.4E+03
Y-INTERCEPT	=	1.2E+01
R-SQUARED	=	0.9955

TEMPERATURE REGRESSION PLOT

Component 127

Reciprocal Temperature, [1/K]

Regr: r-sq.= 0.9955

□ Experimental data

Ln(Henry's Constant), [atm-m3/mol]
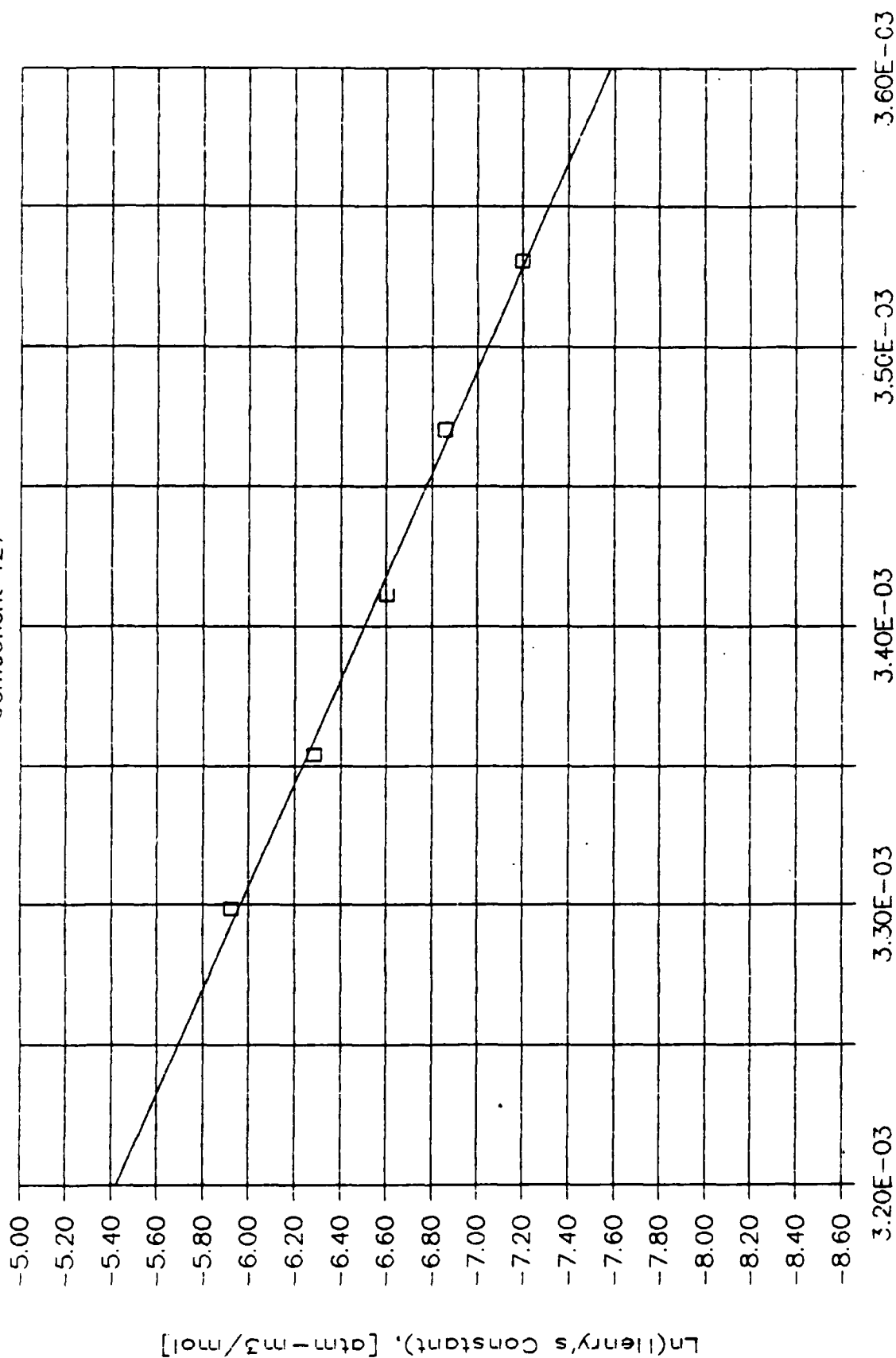
95% CONFIDENCE TEST

Component 127

REGRESSION CONFIDENCE TEST

Component 127, 95% Confidence
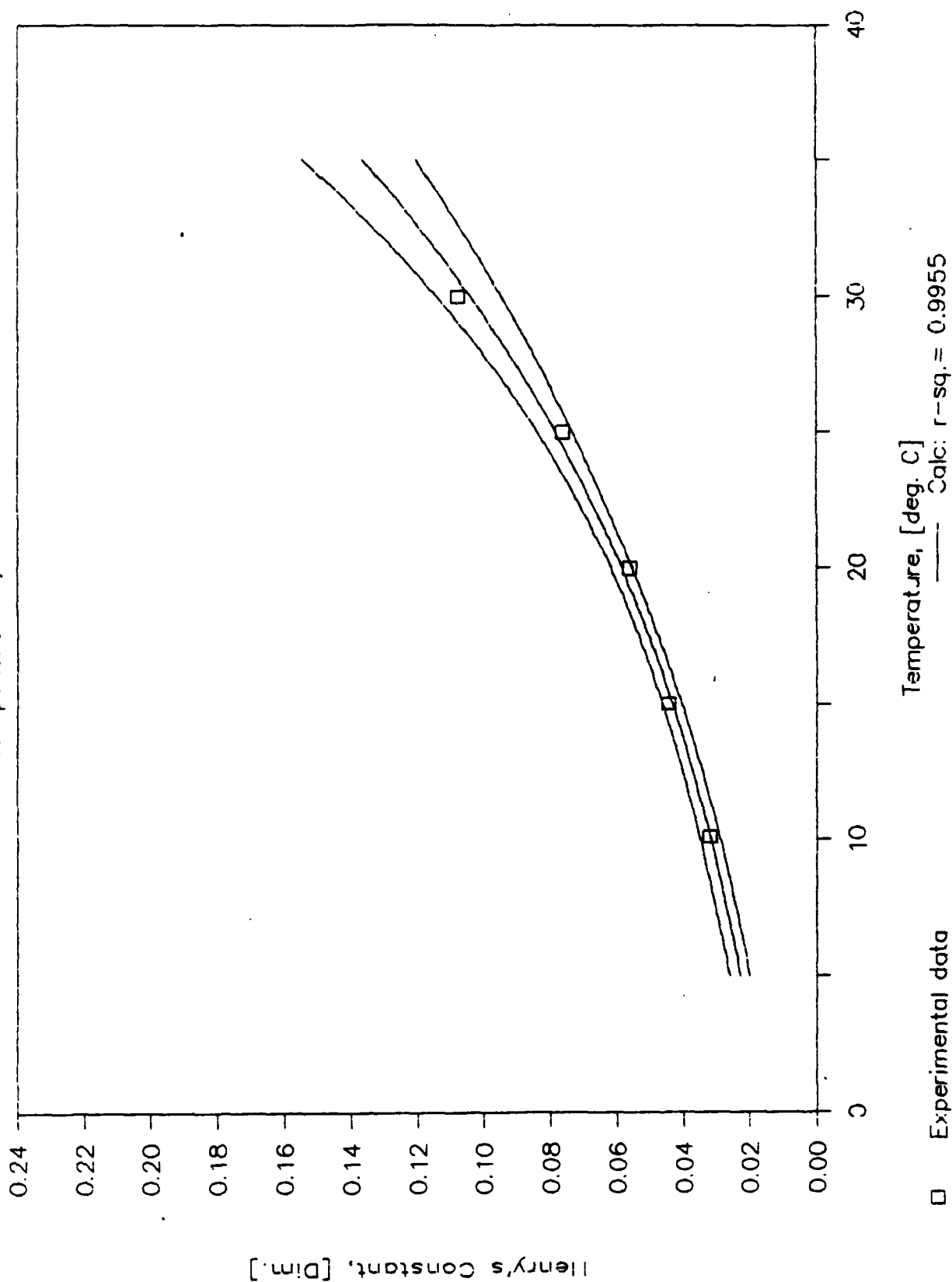
Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Experimental data

—— Calc: r-sq.= 0.9955

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	16		9		10	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	7		7		7	
Component ID	28		28		28	
Temperature (C)	10		14.9		20.2	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	3.0126	1.0E-25	3.5411	1.0E-25	4.3860	1.0E-25
H,avg:atm-mol/mol	3885.4		4646.0		5860.3	
H,avg: atm-m3/mol	7.00E-02	1	8.37E-02	1	1.06E-01	1
H,avg: kPa-m3/mol	7.0927		8.4812		10.6979	
COV, r [std/mean]	6.96		7.74		4.97	
COV, both replic.	———		———		———	
Observation: (1)	2.9477		3.5045		4.6384	
[atm-m3/m3] (2)	3.2691		3.8863		4.4800	
(3)	2.7690		3.2174		4.2835	
(4)	3.0646		3.5563		4.1419	
Injection: (1)	392540		348300		376960	
[Peak Area] (2)	378040		331710		361930	
(3)	189710		152270		141940	
(4)	178540		143830		144460	

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	Temperature 4		Temperature 5	
RUN Number ——)	17		9	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2
Group No.	7		7	
Component ID	28		28	
Temperature (C)	25		30	
Low Vol (ml)	30		30	
High Vol (ml)	210		210	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	4.7742	1.0E-25	7.9859	1.0E-25
H, avg: atm-mol/mol	6483.5		11026.9	
H, avg: atm-m3/mol	1.17E-01	1	1.99E-01	1
H, avg: kPa-m3/mol	11.8355		20.1293	
COV, r [std/mean]	6.79		13.94	
COV, both replic.	———		———	
Observation: (1)	4.4337		6.8830	
[atm-m3/m3] (2)	4.9615		7.2016	
(3)	4.5744		8.6974	
(4)	5.1273		9.1614	
Injection: (1)	504230		542490	
[Peak Area] (2)	512310		593900	
(3)	194260		170490	
(4)	183640		167370	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-4.1E+03
Y-INTERCEPT	=	1.2E+01
R-SQUARED	=	0.9192

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TEMPERATURE REGRESSION PLOT

Component 28

Ln(Henry's Constant), [atm—m3/mol]

Reciprocal Temperature, [1/K]
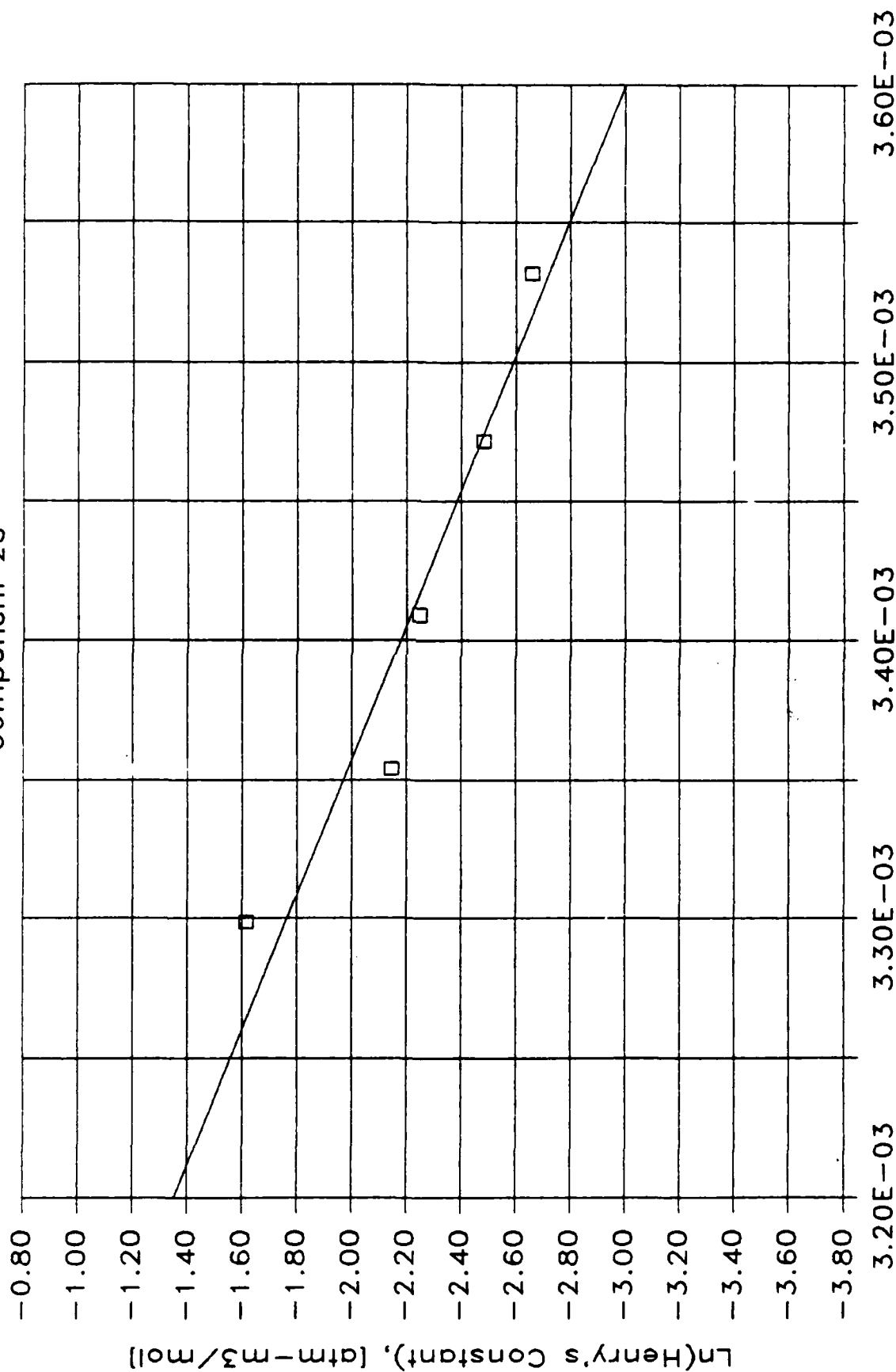
□ Experimental data
—— Regr: r—sq.= 0.9192

95% CONFIDENCE TEST

Component 28

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

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REGRESSION CONFIDENCE TEST

Component 28, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r−sq.= 0.9192

□ Experimental data
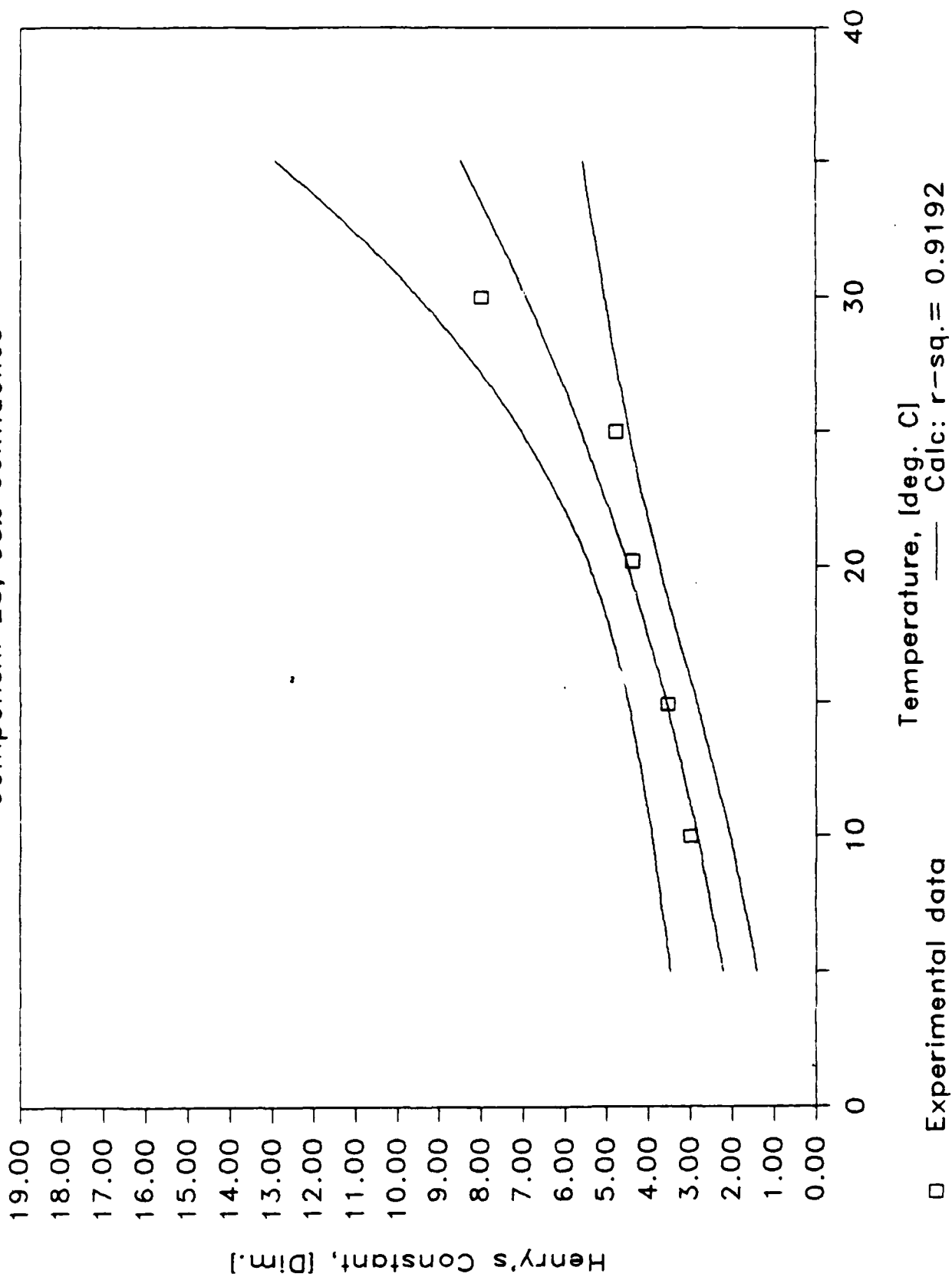
	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	57		74		5	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	15		15		15	
Component ID	128		128		128	
Temperature (C)	10		15.2		19.9	
Low Vol (ml)	30		30		30	
High Vol (ml)	210		210		210	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	2.8119	1.0E-25	3.2727	1.0E-25	4.0582	1.0E-25
H, avg: atm-mol/mol	3626.5		4298.3		5416.9	
H, avg: atm-m3/mol	6.53E-02	1	7.74E-02	1	9.76E-02	1
H, avg: kPa-m3/mol	6.6201		7.8464		9.8884	
COV, r [std/mean]	17.41		9.34		5.76	
COV, both replic.	------		------		------	
Observation: (1)	2.3697		3.0019		3.9925	
[atm-m3/m3] (2)	2.4072		3.5293		4.3445	
(3)	3.2075		3.0145		3.7848	
(4)	3.2631		3.5450		4.1110	
Injection: (1)	272660		355170		292260	
[Peak Area] (2)	327770		356050		283940	
(3)	150730		169800		118950	
(4)	149240		154660		113780	

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		Temperature 4			Temperature 5		
RUN Number ---)		75			58		
REPLICATE ---)		No. 1	No. 2		No. 1	No. 2	
Group No.		15			15		
Component ID		128			128		
Temperature (C)		25.15			30		
Low Vol (ml)		30			30		
High Vol (ml)		210			210		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		5.3682	1.0E-25		9.1613	1.0E-25	
H, avg: atm-mol/mol		7293.9			12650.0		
H, avg: atm-m3/mol		1.31E-01	1		2.28E-01	1	
H, avg: kPa-m3/mol		13.3147			23.0922		
COV, r [std/mean]		3.19			27.78		
COV, both replic.		-----			-----		
Observation: (1)		5.3430			8.7157		
[atm-m3/m3] (2)		5.5796			6.4985		
(3)		5.1628			12.6278		
(4)		5.3876			8.8034		
Injection: (1)		462700			494020		
[Peak Area] (2)		455230			556470		
(3)		162640			141710		
(4)		159390			159050		

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = -5.2E+03$$

$$\text{Y-INTERCEPT} = 1.5E+01$$

$$\text{R-SQUARED} = 0.9343$$

TEMPERATURE REGRESSION PLOT

Component 128

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9343

Ln(Henry's Constant), [atm-m3/mol]

95% CONFIDENCE TEST

Component 128

Henry's Constant, [Dim.]

Temperature, [deg. C]

Lower limit △   Upper limit ▽   Hc,avg. □
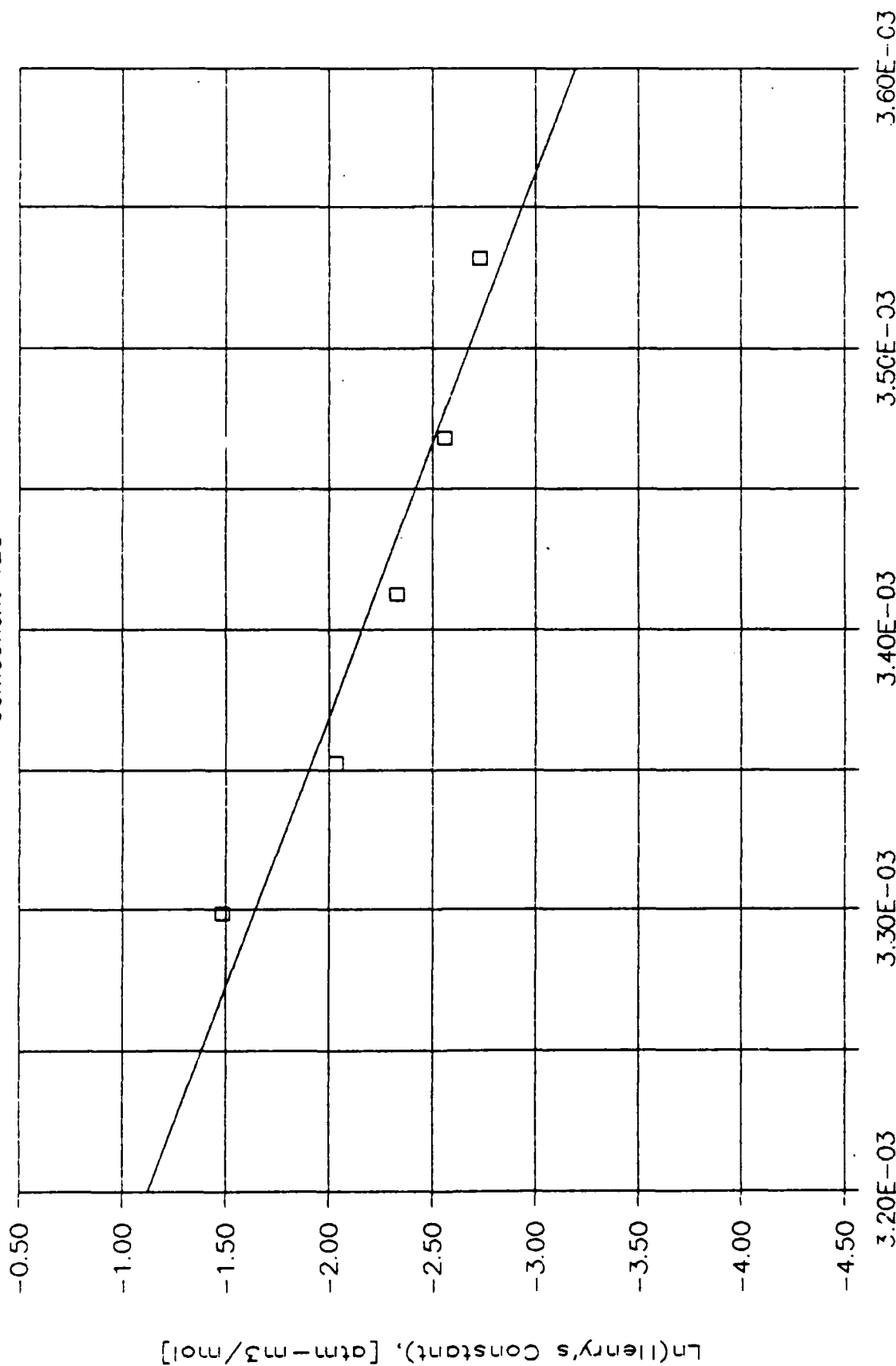
REGRESSION CONFIDENCE TEST

Component 128, 95% Confidence
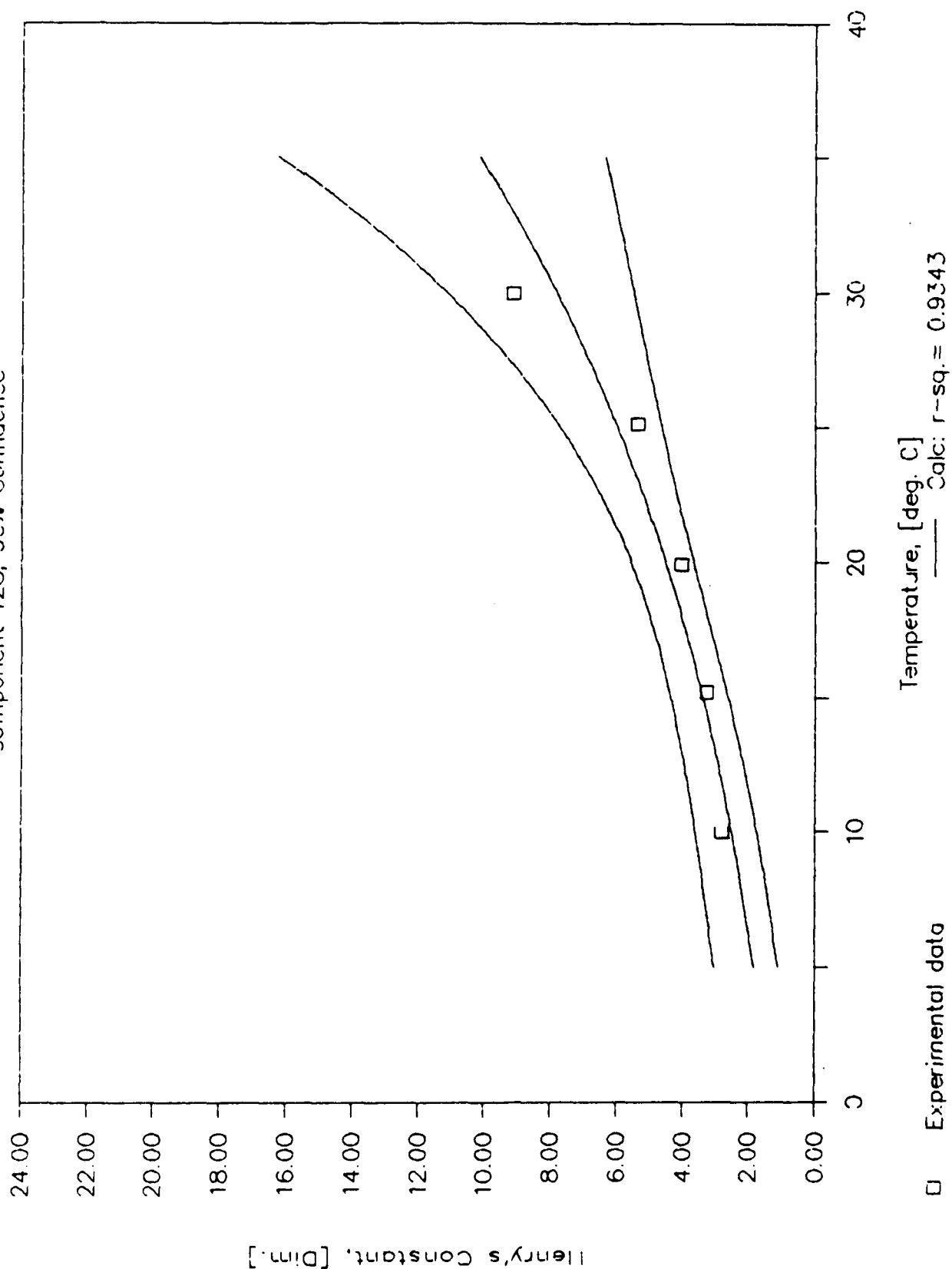
Temperature, [deg. C]

Henry's Constant, [Dim.]

Experimental data

Calc: r-sq.= 0.9343

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ―-)		14		14		15	
REPLICATE ―-)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		8		8		8	
Component ID		30		30		30	
Temperature (C)		10		15		20.2	
Low Vol (ml)		20		20		20	
High Vol (ml)		200		200		200	
System Vol (ml)		250		250		250	
H,avg: atm-m3/m3		0.4505	1.0E-25	0.5503	1.0E-25	0.6020	1.0E-25
H,avg:atm-mol/mol		581.0		722.3		804.3	
H,avg: atm-m3/mol		1.05E-02	1	1.30E-02	1	1.45E-02	1
H,avg: kPa-m3/mol		1.0606		1.3185		1.4683	
COV, r [std/mean]		3.89		6.31		9.12	
COV, both replic.		――――		――――		――――	
Observation:	(1)	0.4365		0.5365		0.6476	
[atm-m3/m3]	(2)	0.4342		0.5914		0.5529	
	(3)	0.4669		0.5105		0.6513	
	(4)	0.4644		0.5628		0.5560	
Injection:	(1)	933510		1043000		1135300	
[Peak Area]	(2)	980890		1005300		1140100	
	(3)	1719900		1649800		1561500	
	(4)	1726600		1534600		1756200	

		Temperature 4		Temperature 5	
RUN Number —)		15		14	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		8		8	
Component ID		30		30	
Temperature (C)		25		30	
Low Vol (ml)		20		20	
High Vol (ml)		200		200	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.9861	1.0E-25	0.7089	1.0E-25
H, avg: atm-mol/mol		1230.5		978.8	
H, avg: atm-m3/mol		2.22E-02	1	1.76E-02	1
H, avg: kPa-m3/mol		2.2462		1.7869	
COV, r [std/mean]		6.18		19.09	
COV, both replic.		——		——	
Observation:	(1)	0.9572		0.5666	
[atm-m3/m3]	(2)	0.9517		0.6295	
	(3)	0.8601		0.7761	
	(4)	0.8552		0.8634	
Injection:	(1)	1864900		1051500	
[Peak Area]	(2)	1725200		1327700	
	(3)	1924700		1597300	
	(4)	1932700		1477000	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -2.7E+03

Y-INTERCEPT   =   5.1E+00

R-SQUARED   =   0.7608

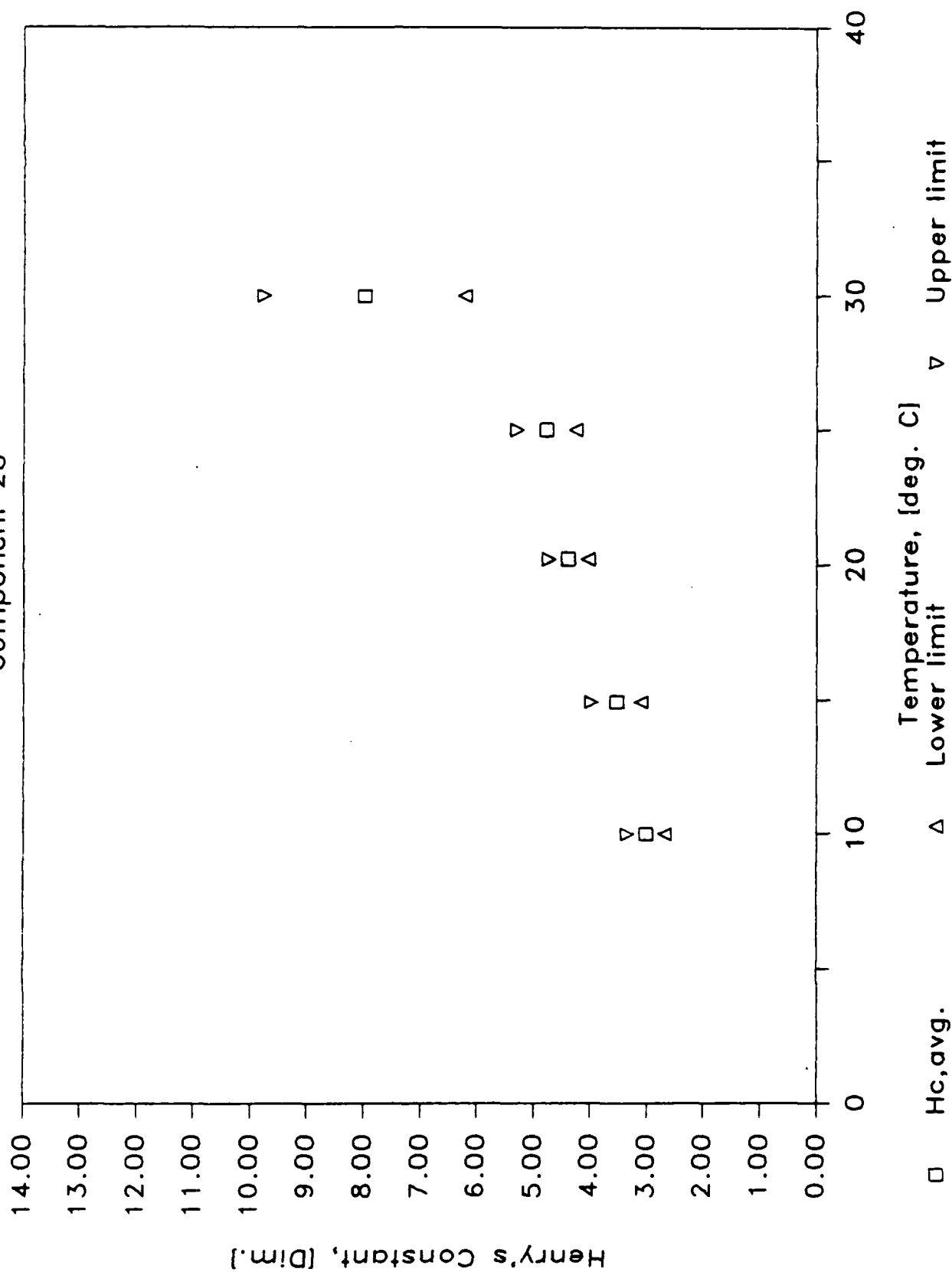241

TEMPERATURE REGRESSION PLOT

Component 30
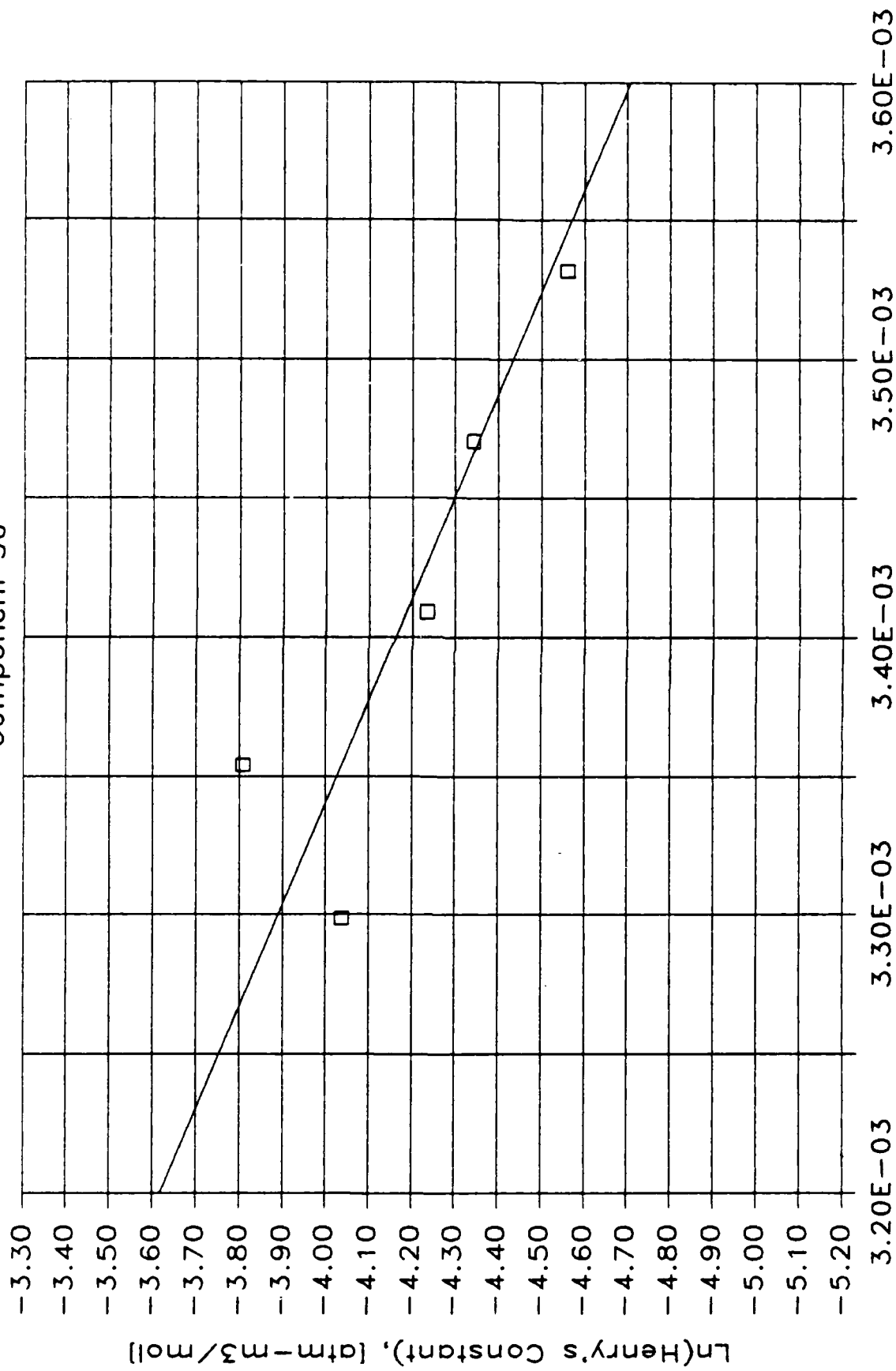
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data
——— Regr: r-sq.= 0.7608

95% CONFIDENCE TEST
Component 30

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▷ Upper limit
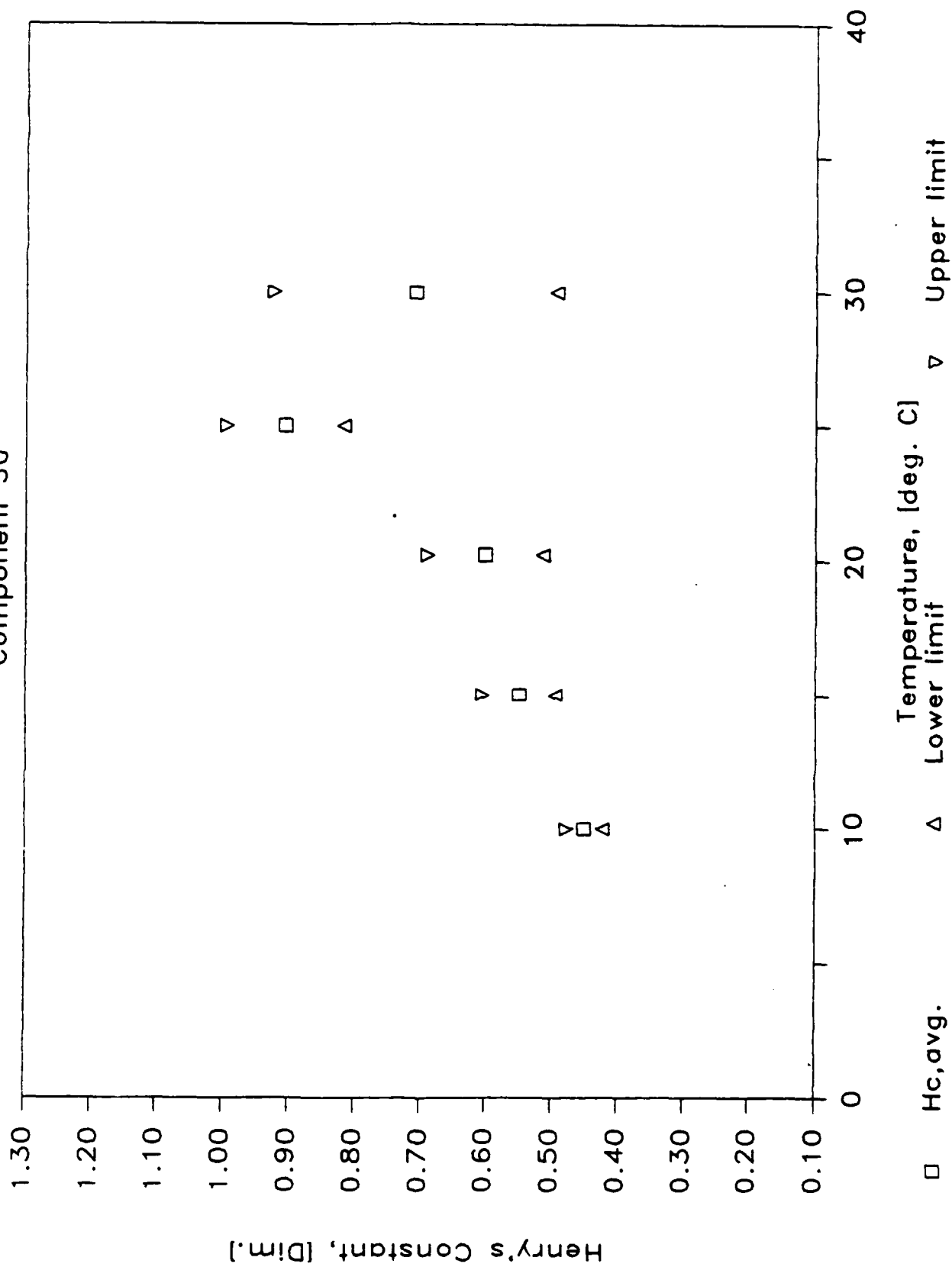
REGRESSION CONFIDENCE TEST

Component 30, 95% Confidence
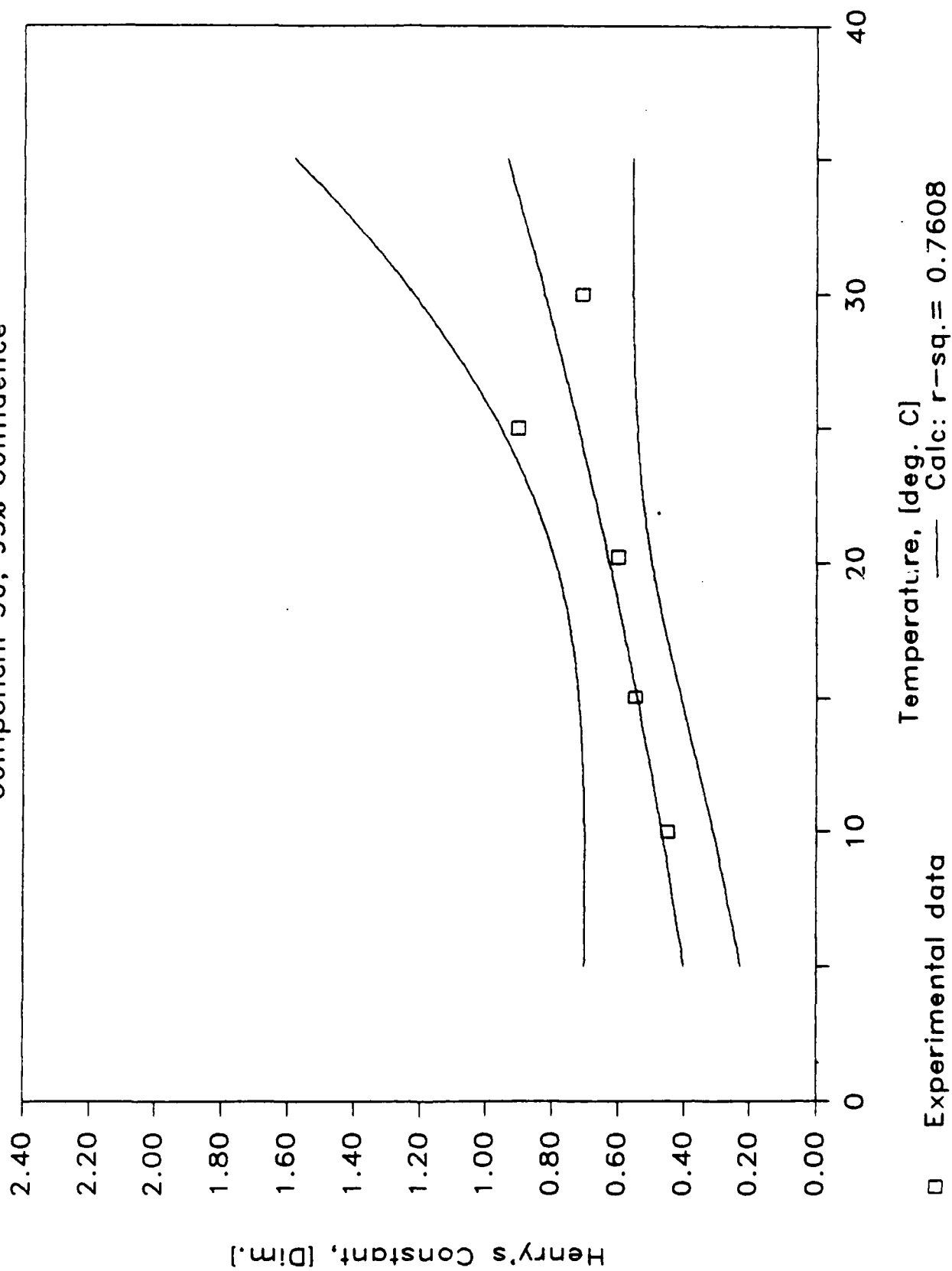
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.7608

□ Experimental data

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)		2		2		2	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		16		16		16	
Component ID		130		130		130	
Temperature (C)		10		15		20.1	
Low Vol (ml)		20		20		20	
High Vol (ml)		200		200		200	
System Vol (ml)		250		250		250	
H,avg: atm-m3/m3		0.6456	1.0E-25	0.7103	1.0E-25	0.9035	1.0E-25
H,avg:atm-mol/mol		832.7		932.2		1206.8	
H,avg: atm-m3/mol		1.50E-02	1	1.68E-02	1	2.17E-02	1
H,avg: kPa-m3/mol		1.5200		1.7017		2.2030	
COV, r [std/mean]		1.27		1.63		0.62	
COV, both replic.		———		———		———	
Observation:	(1)	0.6521		0.7245		0.9061	
[atm-m3/m3]	(2)	0.6379		0.7104		0.9098	
	(3)	0.6534		0.7099		0.8972	
	(4)	0.6392		0.6962		0.9008	
Injection:	(1)	1372200		1544100		1765200	
[Peak Area]	(2)	1374300		1521100		1752500	
	(3)	1877800		1954400		1895800	
	(4)	1908700		1982900		1890200	

		Temperature 4			Temperature 5		
RUN Number --->		3			3		
REPLICATE --->		No. 1	No. 2		No. 1	No. 2	
Group No.		16			16		
Component ID		130			130		
Temperature (C)		25.1			30		
Low Vol (ml)		20			20		
High Vol (ml)		200			200		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		1.0821	1.0E-25		1.1273	1.0E-25	
H, avg: atm-mol/mol		1470.0			1556.5		
H, avg: atm-m3/mol		2.65E-02	1		2.80E-02	1	
H, avg: kPa-m3/mol		2.6835			2.8414		
COV, r [std/mean]		1.24			2.97		
COV, both replic.		----			----		
Observation: (1)		1.0896			1.1408		
[atm-m3/m3] (2)		1.0967			1.1661		
(3)		1.0676			1.0891		
(4)		1.0746			1.1131		
Injection: (1)		2142000			2314200		
[Peak Area] (2)		2111100			2239200		
(3)		2014400			2106500		
(4)		2005000			2074100		

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = -2.9E+03$$

$$\text{Y-INTERCEPT} = 6.1E+00$$

$$\text{R-SQUARED} = 0.9700$$

TEMPERATURE REGRESSION PLOT

Component 130

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sc.= 0.97

95% CONFIDENCE TEST

Component 13.0

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
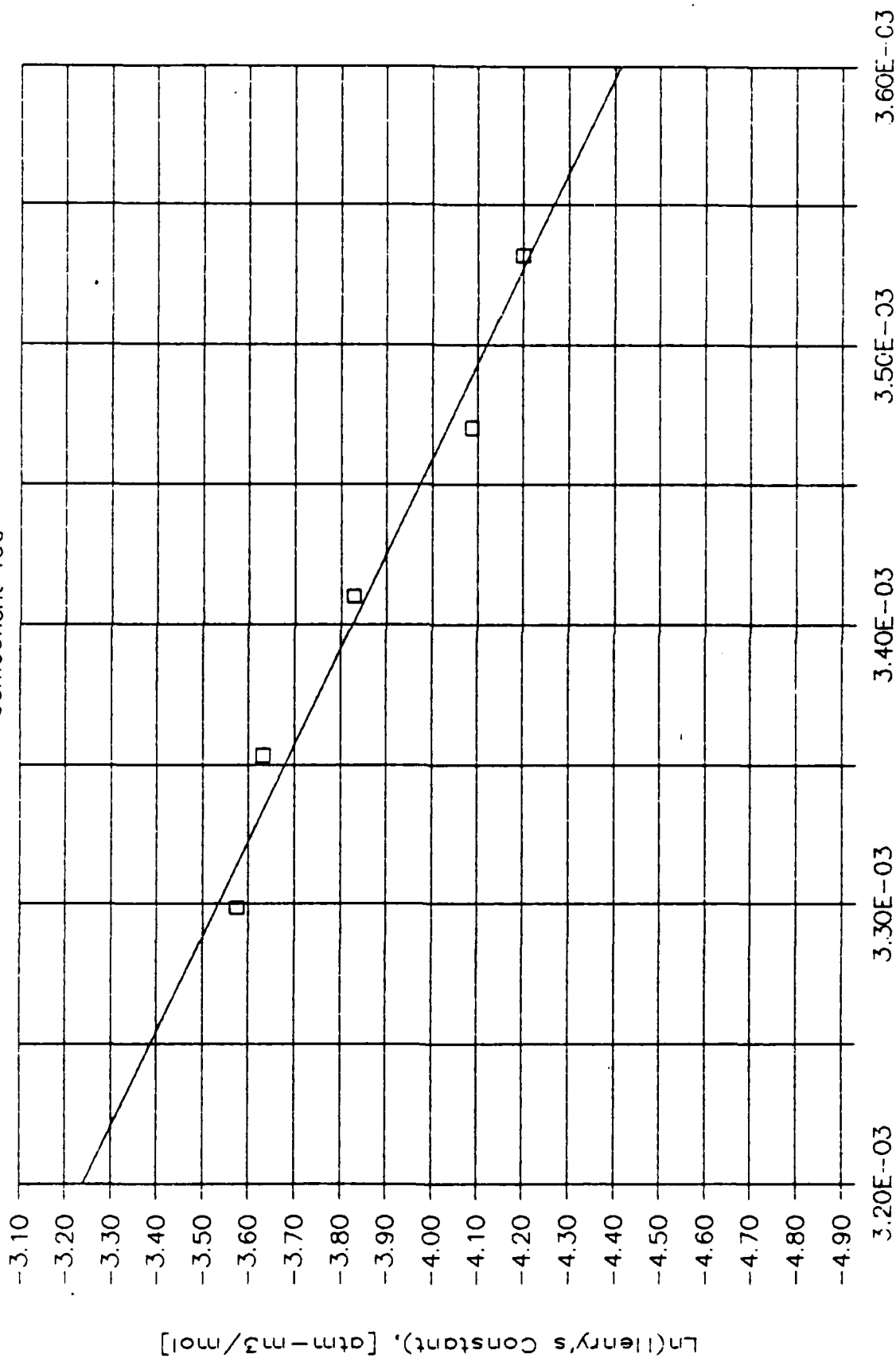
REGRESSION CONFIDENCE TEST

Component 130, 95% Confidence
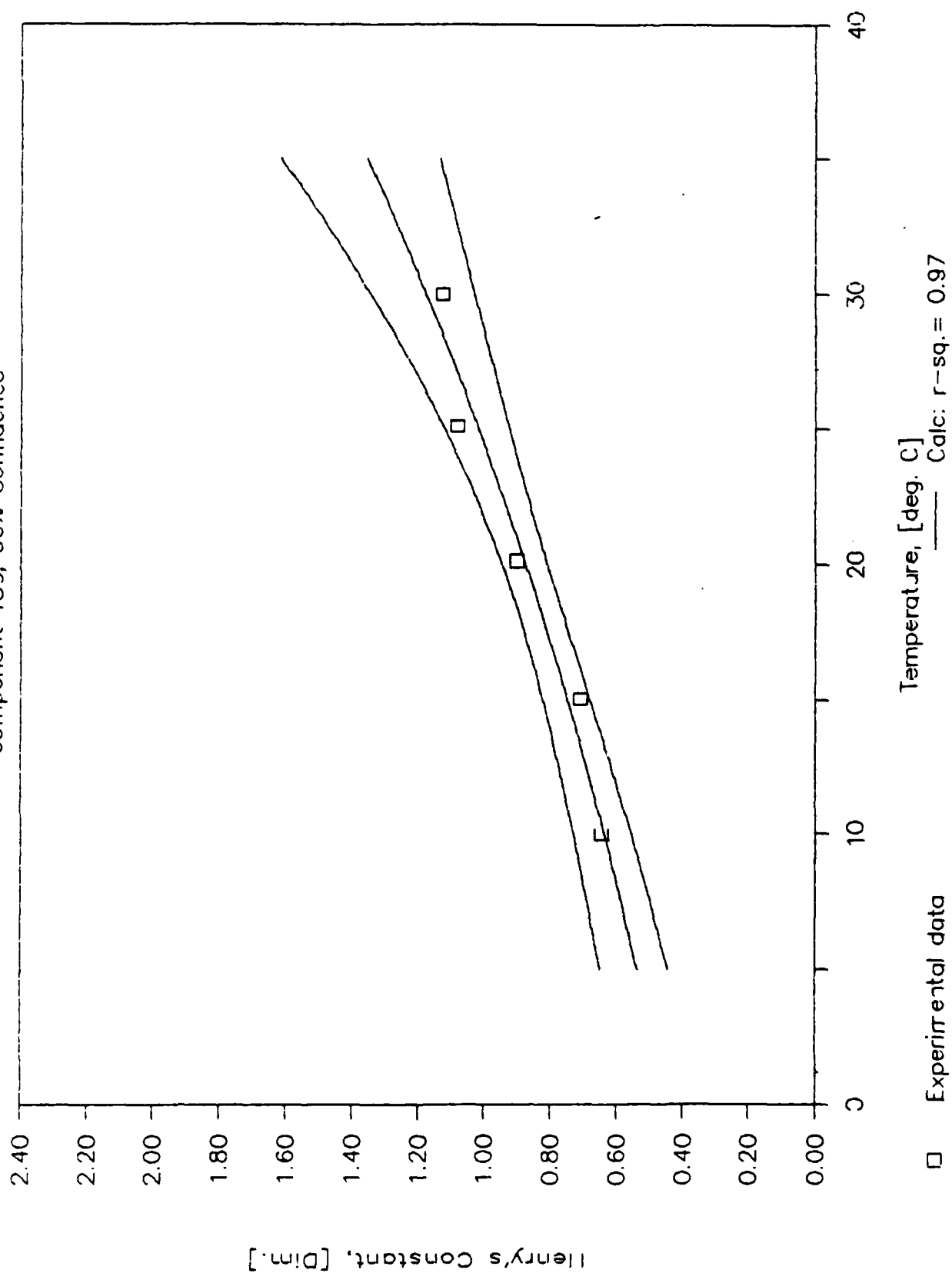
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

Calc: r-sq.= 0.97

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)		2		2		3	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		8		8		8	
Component ID		31		31		31	
Temperature (C)		10		15		20.2	
Low Vol (ml)		25		25		25	
High Vol (ml)		205		205		205	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.3268	1.0E-25	0.4053	1.0E-25	0.4562	1.0E-25
H, avg: atm-mol/mol		421.4		531.9		609.6	
H, avg: atm-m3/mol		7.59E-03	1	9.58E-03	1	1.10E-02	1
H, avg: kPa-m3/mol		0.7693		0.9710		1.1128	
COV, r [std/mean]		3.50		1.50		0.99	
COV, both replic.		——		——		——	
Observation:	(1)	0.3173		0.4000		0.4535	
[atm-m3/m3]	(2)	0.3164		0.4122		0.4611	
	(3)	0.3371		0.3984		0.4514	
	(4)	0.3362		0.4025		0.4590	
Injection:	(1)	689720		656590		737300	
[Peak Area]	(2)	718730		645670		734900	
	(3)	1569000		1255600		1308300	
	(4)	1572000		1246500		1292900	

		Temperature 4			Temperature 5		
RUN Number —)		3			3		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2	
Group No.		8			8		
Component ID		31			31		
Temperature (C)		25			30		
Low Vol (ml)		25			25		
High Vol (ml)		205			205		
System Vol (ml)		250			250		
H,avg: atm-m3/m3		0.4951	1.0E-25		0.5746	1.0E-25	
H,avg:atm-mol/mol		672.3			793.4		
H,avg: atm-m3/mol		1.21E-02	1		1.43E-02	1	
H,avg: kPa-m3/mol		1.2274			1.4484		
COV, r [std/mean]		1.46			0.59		
COV, both replic.		———			———		
Observation: (1)		0.4925			0.5712		
[atm-m3/m3] (2)		0.4867			0.5722		
(3)		0.5036			0.5770		
(4)		0.4976			0.5780		
Injection: (1)		1057500			780960		
[Peak Area] (2)		1074500			786730		
(3)		1768700			1173600		
(4)		1784000			1172100		

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-2.6E+03
Y-INTERCEPT	=	4.3E+00
R-SQUARED	=	0.9835

TEMPERATURE REGRESSION PLOT

Component 31

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
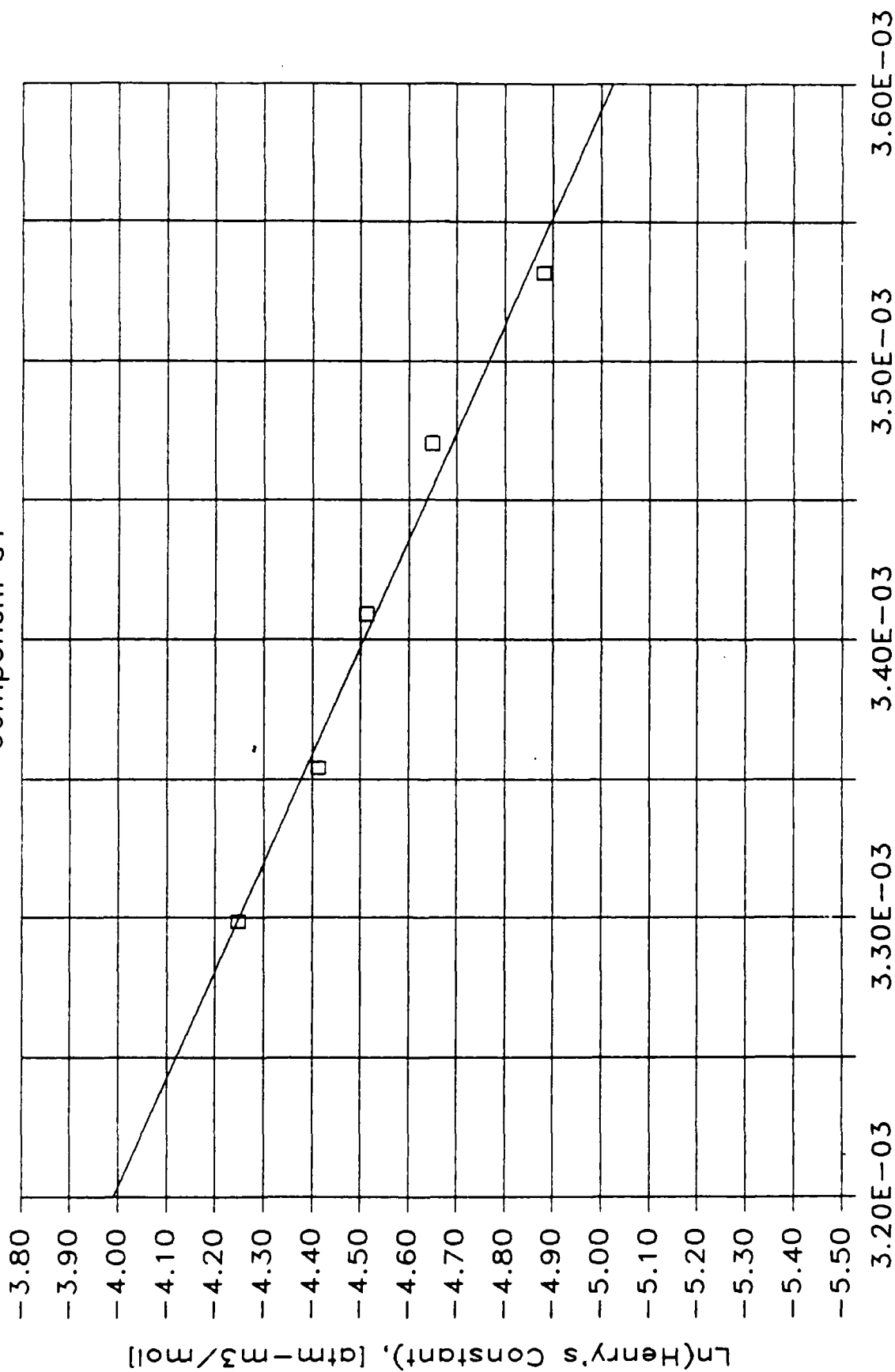
□ Experimental data
— Regr: r-sq.= 0.9835

95% CONFIDENCE TEST
Component 31

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▷ Upper limit
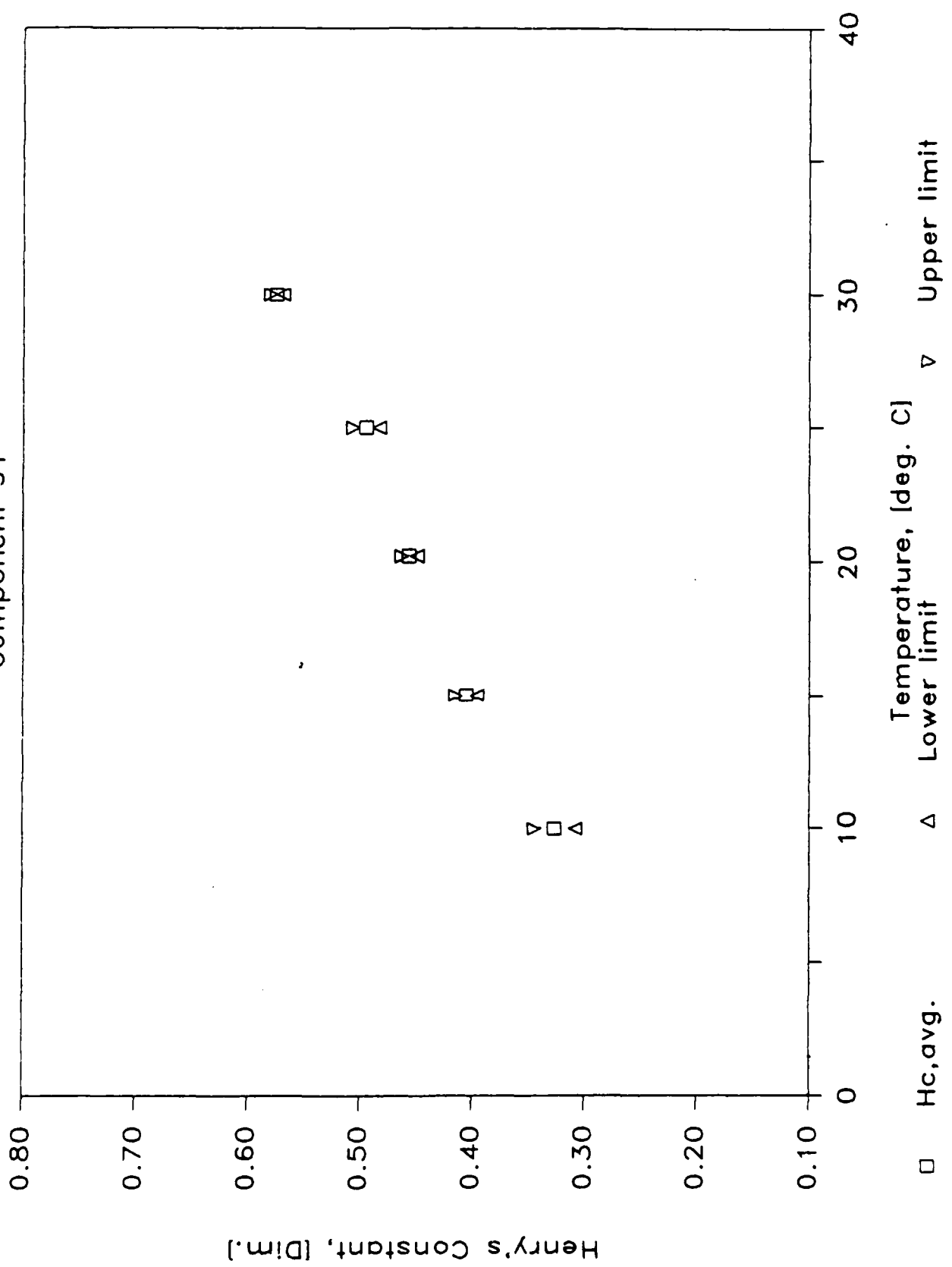
REGRESSION CONFIDENCE TEST

Component 31, 95% Confidence
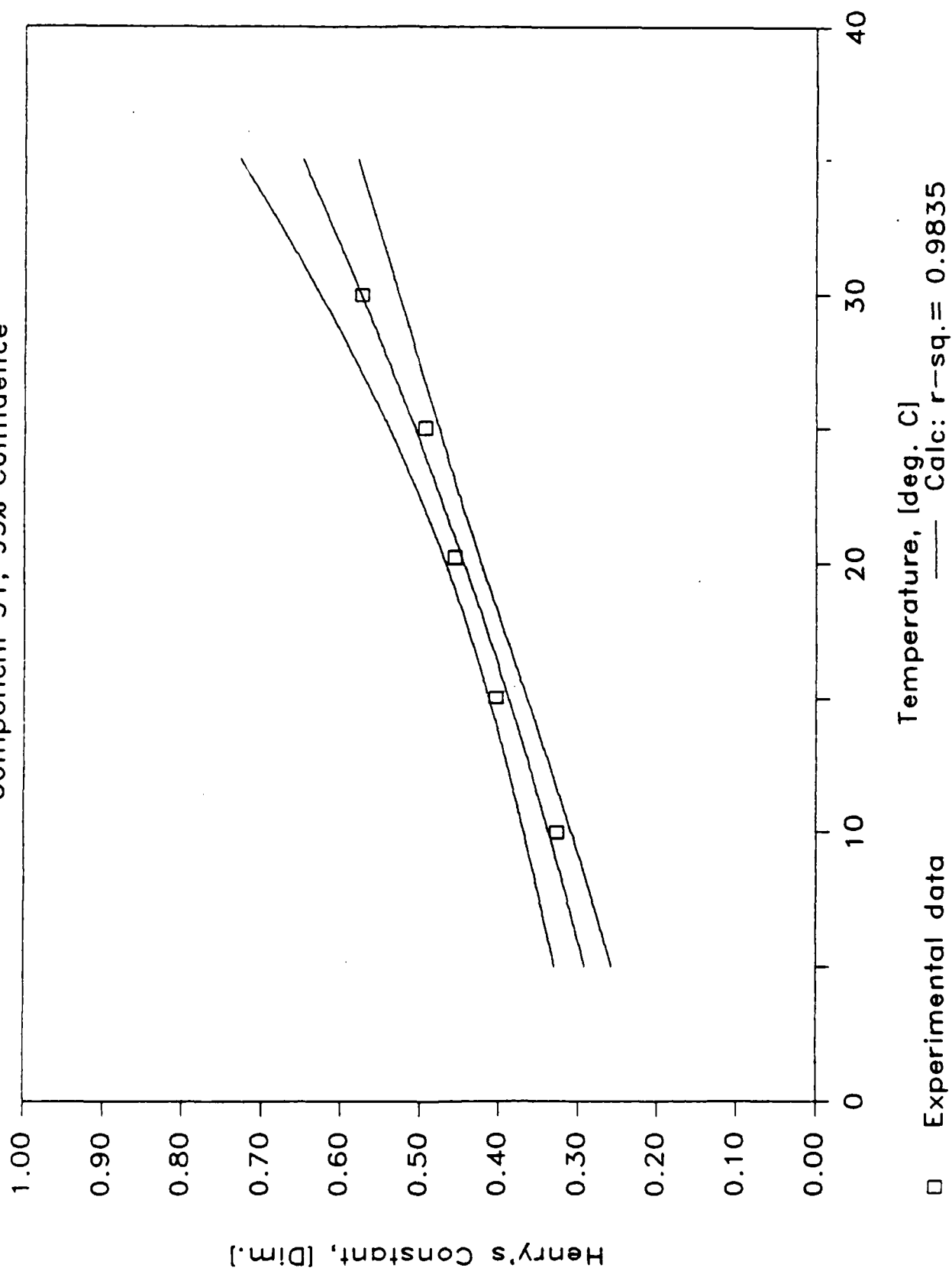
Henry's Constant, [Dim.]

Temperature, [deg. C]

☐ Experimental data

—— Calc: r-sq.= 0.9835

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —-)	6		6		7	
REPLICATE —-)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	8		8		8	
Component ID	32		32		32	
Temperature (C)	10		15		20.2	
Low Vol (ml)	24		24		24	
High Vol (ml)	204		204		204	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.2552	1.0E-25	0.2371	1.0E-25	0.2456	1.0E-25
H,avg:atm-mol/mol	329.1		311.2		328.2	
H,avg: atm-m3/mol	5.93E-03	1	5.61E-03	1	5.91E-03	1
H,avg: kPa-m3/mol	0.6007		0.5681		0.5991	
COV, r [std/mean]	5.28		7.23		21.26	
COV, both replic.	——		——		——	
Observation: (1)	0.2396		0.2363		0.2000	
[atm-m3/m3] (2)	0.2500		0.2584		0.2903	
(3)	0.2600		0.2165		0.2008	
(4)	0.2710		0.2372		0.2914	
Injection: (1)	15413		17380		20556	
[Peak Area] (2)	16250		16442		20607	
(3)	42408		48241		63337	
(4)	41259		45532		49862	

		Temperature 4			Temperature 5		
RUN Number --->		7			7		
REPLICATE --->		No. 1	No. 2		No. 1	No. 2	
Group No.		8			8		
Component ID		32			32		
Temperature (C)		25			30		
Low Vol (ml)		24			24		
High Vol (ml)		204			204		
System Vol (ml)		250			250		
H,avg: atm-m3/m3		0.3411	1.0E-25		0.4151	1.0E-25	
H,avg:atm-mol/mol		463.3			573.1		
H,avg: atm-m3/mol		8.35E-03	1		1.03E-02	1	
H,avg: kPa-m3/mol		0.8457			1.0463		
COV, r [std/mean]		1.48			4.66		
COV, both replic.		------			------		
Observation: (1)		0.3430			0.3936		
[atm-m3/m3] (2)		0.3353			0.4053		
(3)		0.3470			0.4244		
(4)		0.3392			0.4370		
Injection: (1)		26673			32169		
[Peak Area] (2)		26888			33937		
(3)		57740			63256		
(4)		58662			61954		

Temperature Regression Parameters:

\# OF POINTS =   5

SLOPE =   -2.6E+03

Y-INTERCEPT =   3.7E+00

R-SQUARED =   0.7682

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TEMPERATURE REGRESSION PLOT

Component 32

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
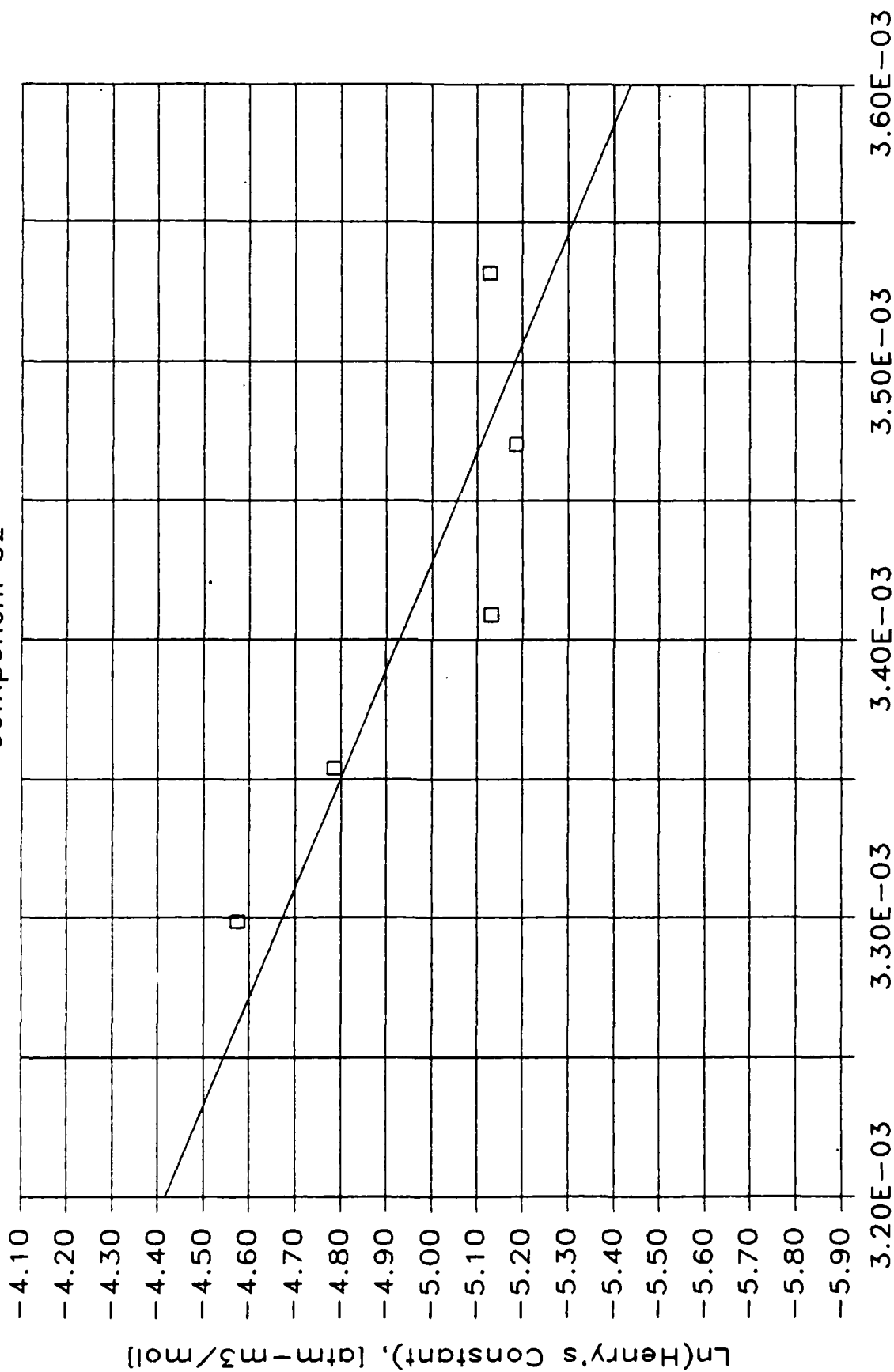
□ Experimental data

—— Regr: r-sq.= 0.7682

95% CONFIDENCE TEST
Component 32

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit
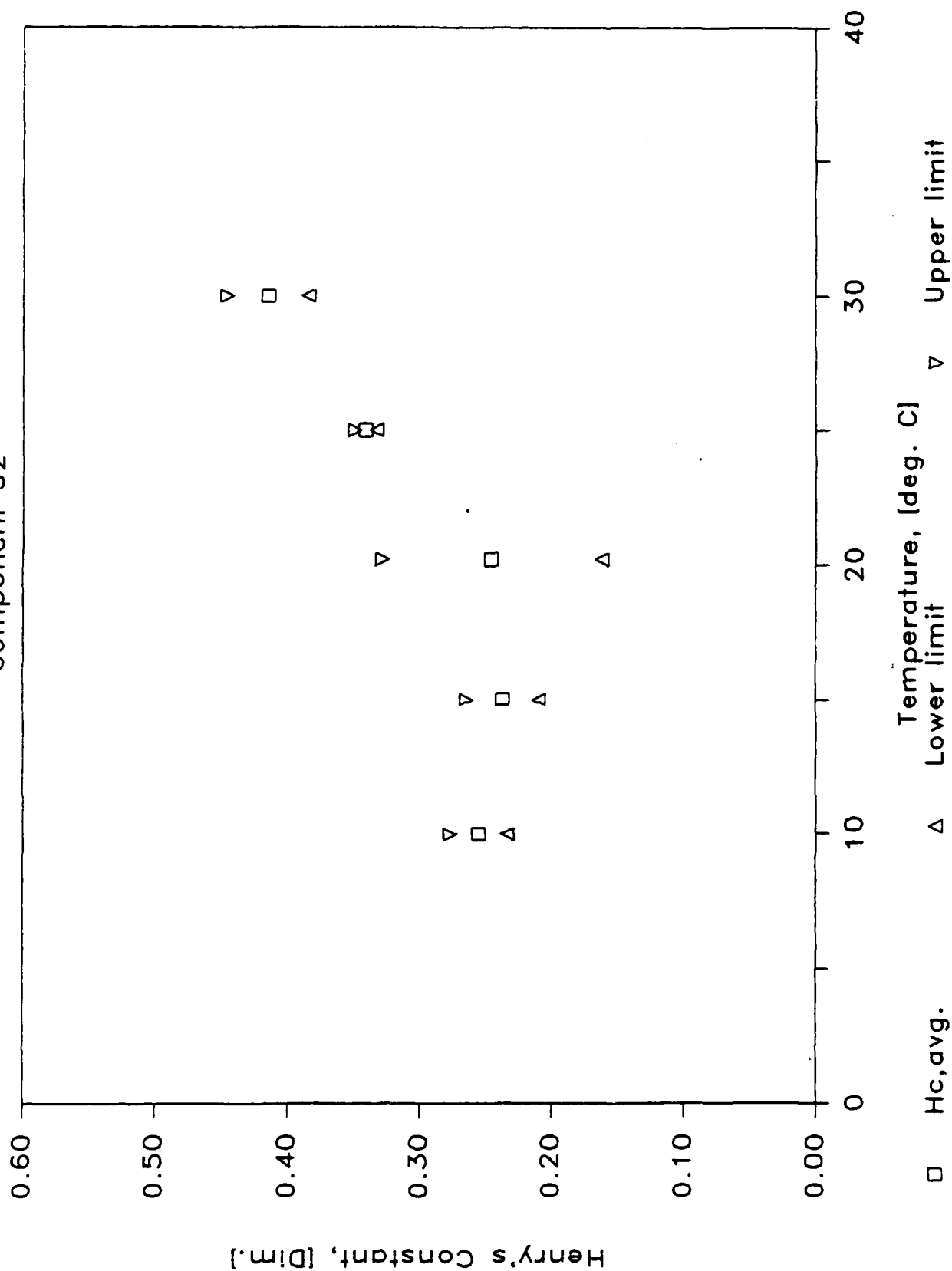
REGRESSION CONFIDENCE TEST

Component 32, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.7682

□ Experimental data
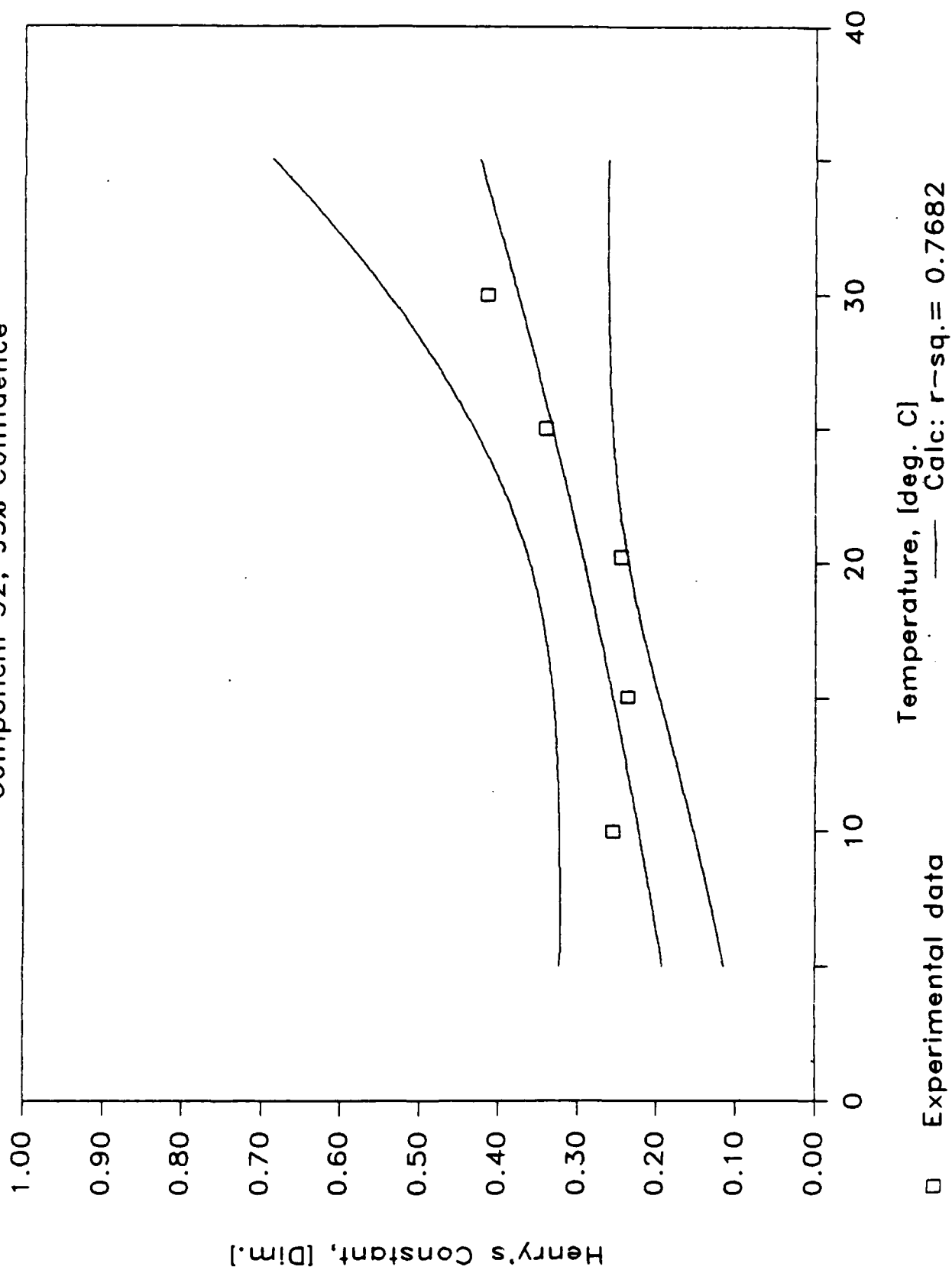
		Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)		64		78		8	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		15		15		15	
Component ID		132		132		132	
Temperature (C)		10		15.2		19.9	
Low Vol (ml)		24		24		24	
High Vol (ml)		204		204		204	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0921	1.0E-25	0.3077	1.0E-25	0.2412	1.0E-25
H, avg: atm-mol/mol		118.7		404.1		321.9	
H, avg: atm-m3/mol		2.14E-03	1	7.28E-03	1	5.80E-03	1
H, avg: kPa-m3/mol		0.2168		0.7376		0.5877	
COV, r [std/mean]		43.00		8.65		4.61	
COV, both replic.		———		———		———	
Observation: (1)		0.1318		0.3003		0.2488	
[atm-m3/m3] (2)		0.1201		0.3402		0.2299	
(3)		0.0622		0.2764		0.2525	
(4)		0.0541		0.3137		0.2335	
Injection: (1)		8663		13347		16237	
[Peak Area] (2)		6225		12625		16395	
(3)		33831		31643		43606	
(4)		35484		29060		45863	

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		Temperature 4		Temperature 5	
RUN Number —)		79		65	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		15		15	
Component ID		132		132	
Temperature (C)		25.15		30	
Low Vol (ml)		24		24	
High Vol (ml)		204		204	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		0.4235	1.0E-25	0.3595	1.0E-25
H,avg:atm-mol/mol		575.5		496.5	
H,avg: atm-m3/mol		1.04E-02	1	8.94E-03	1
H,avg: kPa-m3/mol		1.0505		0.9063	
COV, r [std/mean]		14.83		21.65	
COV, both replic.		———		———	
Observation:	(1)	0.4888		0.3850	
[atm-m3/m3]	(2)	0.4649		0.2735	
	(3)	0.3798		0.4542	
	(4)	0.3607		0.3255	
Injection:	(1)	22732		25816	
[Peak Area]	(2)	18988		29033	
	(3)	38287		51556	
	(4)	39698		65164	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-5.6E+03
Y-INTERCEPT	=	1.4E+01
R-SQUARED	=	0.6876

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TEMPERATURE REGRESSION PLOT

Component 132
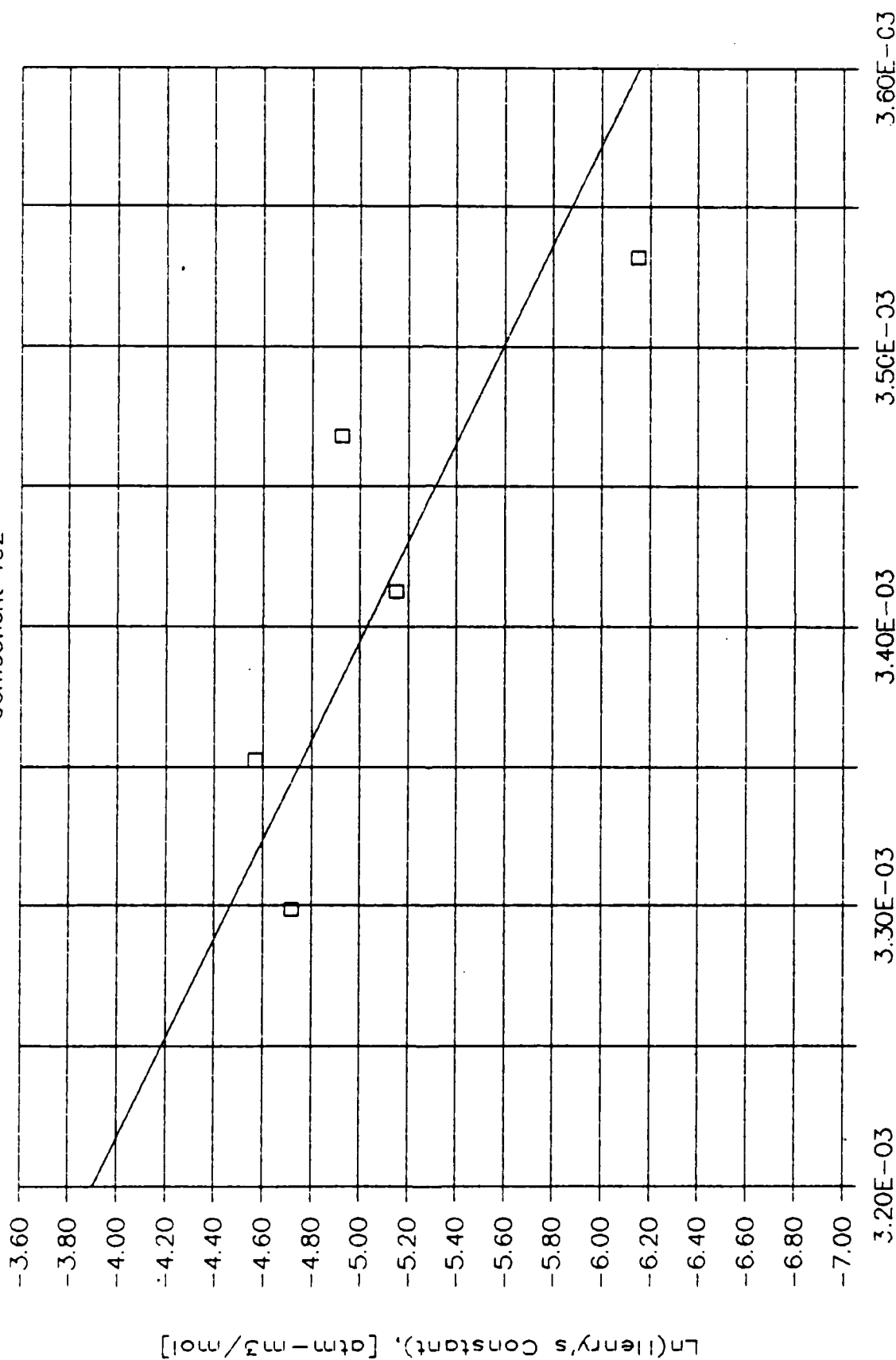
Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.6876

Ln(Henry's Constant), [atm-m3/mol]

95% CONFIDENCE TEST

Component 132

Henry's Constant, [Dim.]

Temperature, [deg. C]

Hc,avg. □   Lower limit △   Upper limit ▽
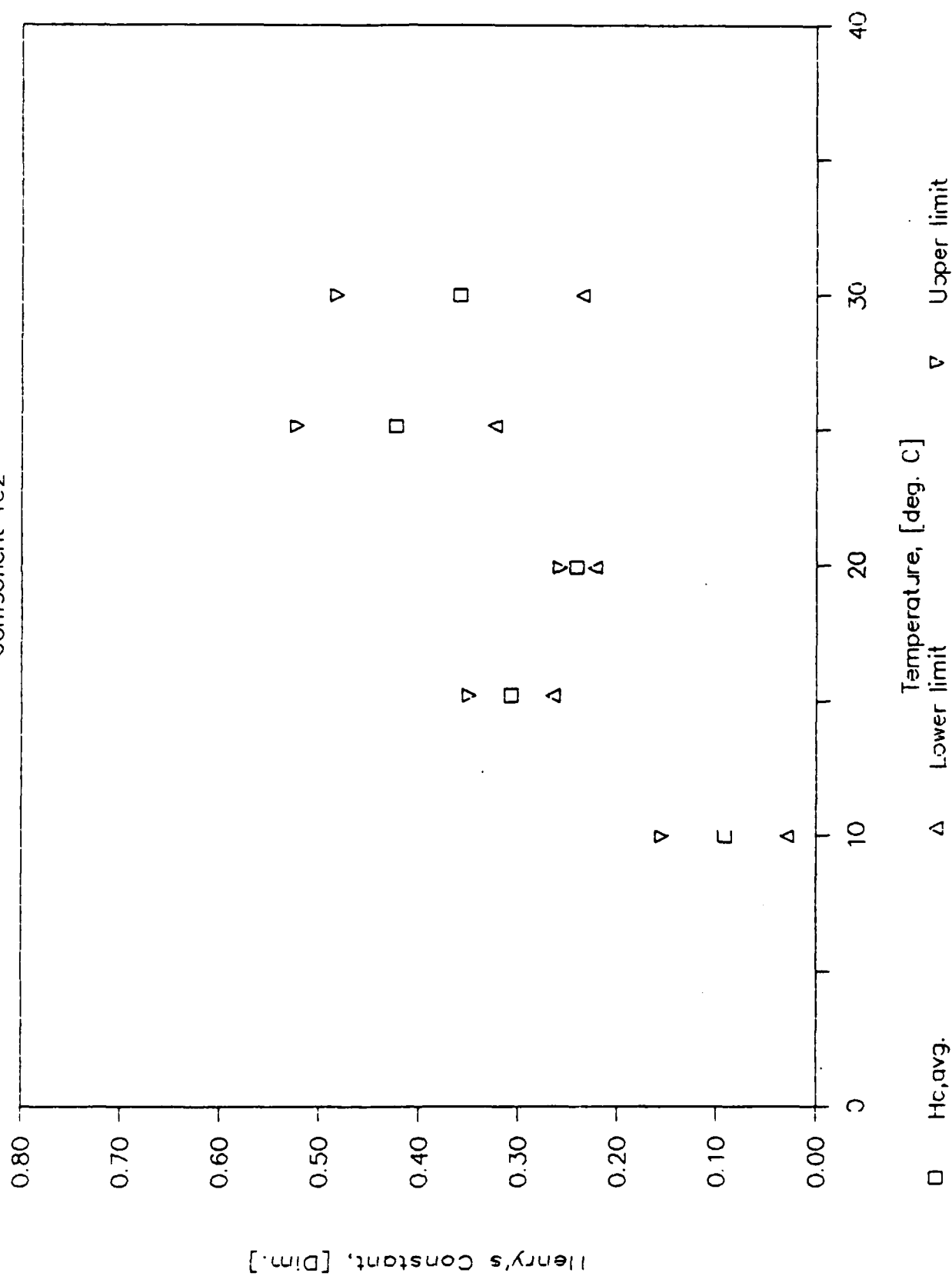
REGRESSION CONFIDENCE TEST

Component 132, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.6876

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)	10		10		11	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	8		8		8	
Component ID	33		33		33	
Temperature (C)	10		15		20.2	
Low Vol (ml)	22		22		22	
High Vol (ml)	202		202		202	
System Vol (ml)	250		250		250	
r, avg: atm-m3/m3	0.6386	1.0E-25	0.8083	1.0E-25	0.9653	1.0E-25
H, avg:atm-mol/mol	823.6		1060.9		1289.8	
H, avg: atm-m3/mol	1.48E-02	1	1.91E-02	1	2.32E-02	1
H, avg: kPa-m3/mol	1.5035		1.9366		2.3545	
COV, r [std/mean]	1.28		3.90		3.41	
COV, both replic.	———		———		———	
Observation: (1)	0.6336		0.8033		0.9497	
[atm-m3/m3] (2)	0.6300		0.8471		0.9283	
(3)	0.6473		0.7704		1.0029	
(4)	0.6435		0.8124		0.9802	
Injection: (1)	376280		393720		454690	
[Peak Area] (2)	382240		381840		472930	
(3)	525350		461660		471940	
(4)	527600		444080		479800	

		Temperature 4		Temperature 5	
RUN Number —)		11		10	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		8		8	
Component ID		33		33	
Temperature (C)		25		30	
Low Vol (ml)		22		22	
High Vol (ml)		202		202	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		1.2036	1.0E-25	1.5210	1.0E-25
H, avg: atm-mol/mol		1634.5		2100.2	
H, avg: atm-m3/mol		2.94E-02	1	3.78E-02	1
H, avg: kPa-m3/mol		2.9837		3.8338	
COV, r [std/mean]		2.25		5.93	
COV, both replic.		——		——	
Observation:	(1)	1.2332		1.4176	
[atm-m3/m3]	(2)	1.1881		1.5524	
	(3)	1.2188		1.4856	
	(4)	1.1743		1.6283	
Injection:	(1)	637490		485580	
[Peak Area]	(2)	632260		501320	
	(3)	549240		379840	
	(4)	563790		357150	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-4.0E+03
Y-INTERCEPT	=	9.7E+00
R-SQUARED	=	0.9965

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TEMPERATURE REGRESSION PLOT

Component 33

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data
—— Regr: r-sq.= 0.9965

95% CONFIDENCE TEST

Component 33

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc, avg.   △ Lower limit   ▽ Upper limit
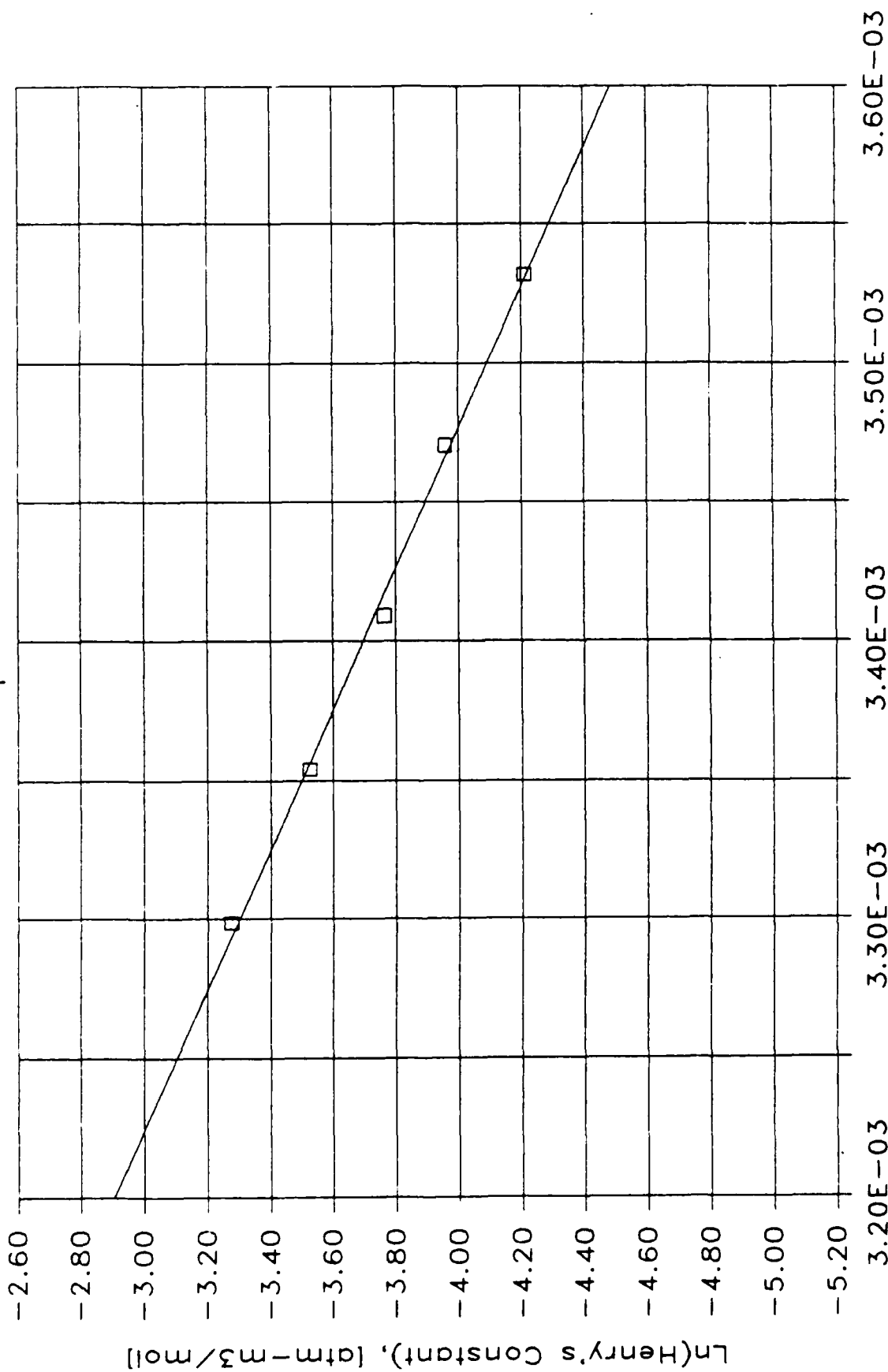
REGRESSION CONFIDENCE TEST

Component 33, 95% Confidence
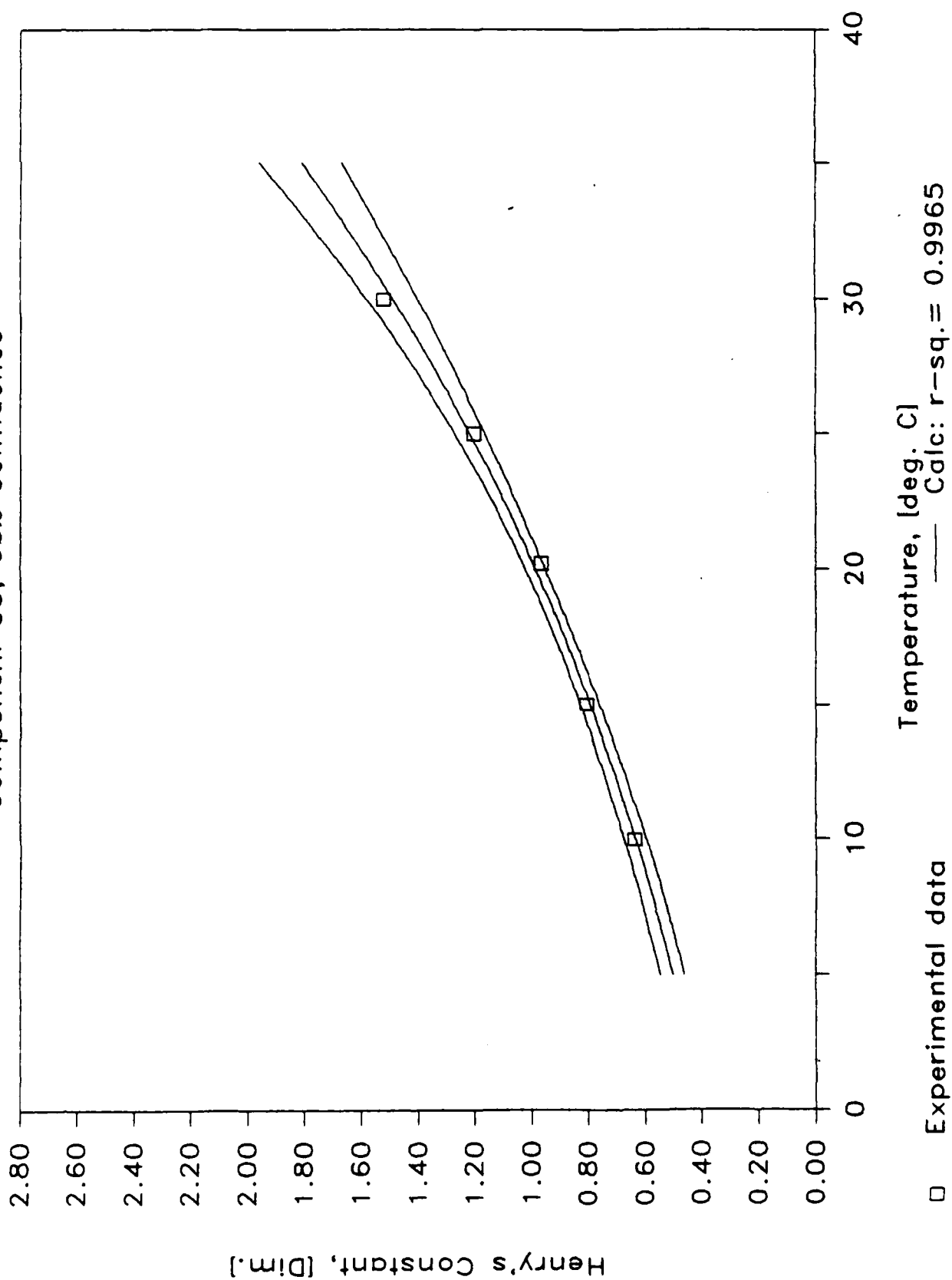
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
—— Calc: r-sq.= 0.9965

		Temperature 1		Temperature 2		Temperature 3		
RUN Number ---)		6		6		7		
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	
Group No.		4		4		4		
Component ID		34		34		34		
Temperature (C)		10		14.9		20.1		
Low Vol (ml)		30		30		30		
High Vol (ml)		210		210		210		
System Vol (ml)		250		250		250		
H,avg: atm-m3/m3		0.1733	1.0E-25	0.1945	1.0E-25	0.2374	1.0E-25	
H,avg:atm-mol/mol		223.5		255.1		317.1		
H,avg: atm-m3/mol		4.03E-03	1	4.60E-03	1	5.71E-03	1	
H,avg: kPa-m3/mol		0.4080		0.4657		0.5788		
COV, r [std/mean]		4.52		1.89		4.81		
COV, both replic.		-----		-----		-----		
Observation: (1)		0.1829		0.1988		0.2284		
[atm-m3/m3] (2)		0.1745		0.1934		0.2482		
(3)		0.1720		0.1955		0.2266		
(4)		0.1639		0.1901		0.2463		
Injection: (1)		113040		174540		222800		
[Peak Area] (2)		110170		172910		221780		
(3)		352230		515850		608350		
(4)		361220		523870		579170		

		Temperature 4			Temperature 5	
RUN Number ---)		7			7	
REPLICATE ---)		No. 1	No. 2		No. 1	No. 2
Group No.		4			4	
Component ID		34			34	
Temperature (C)		25			30	
Low Vol (ml)		30			30	
High Vol (ml)		210			210	
System Vol (ml)		250			250	
H,avg: atm-m3/m3		0.2752	1.0E-25		0.3870	1.0E-25
H,avg:atm-mol/mol		373.7			534.3	
H,avg: atm-m3/mol		6.73E-03	1		9.63E-03	1
H,avg: kPa-m3/mol		0.6822			0.9754	
COV, r [std/mean]		2.70			0.48	
COV, both replic.		-----			-----	
Observation:	(1)	0.2672			0.3856	
[atm-m3/m3]	(2)	0.2708			0.3852	
	(3)	0.2795			0.3888	
	(4)	0.2832			0.3884	
Injection:	(1)	232930			396380	
[Peak Area]	(2)	239480			398590	
	(3)	579010			778120	
	(4)	574210			778720	

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.6E+03
Y-INTERCEPT	=	7.2E+00
R-SQUARED	=	0.9622

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TEMPERATURE REGRESSION PLOT

Component 34
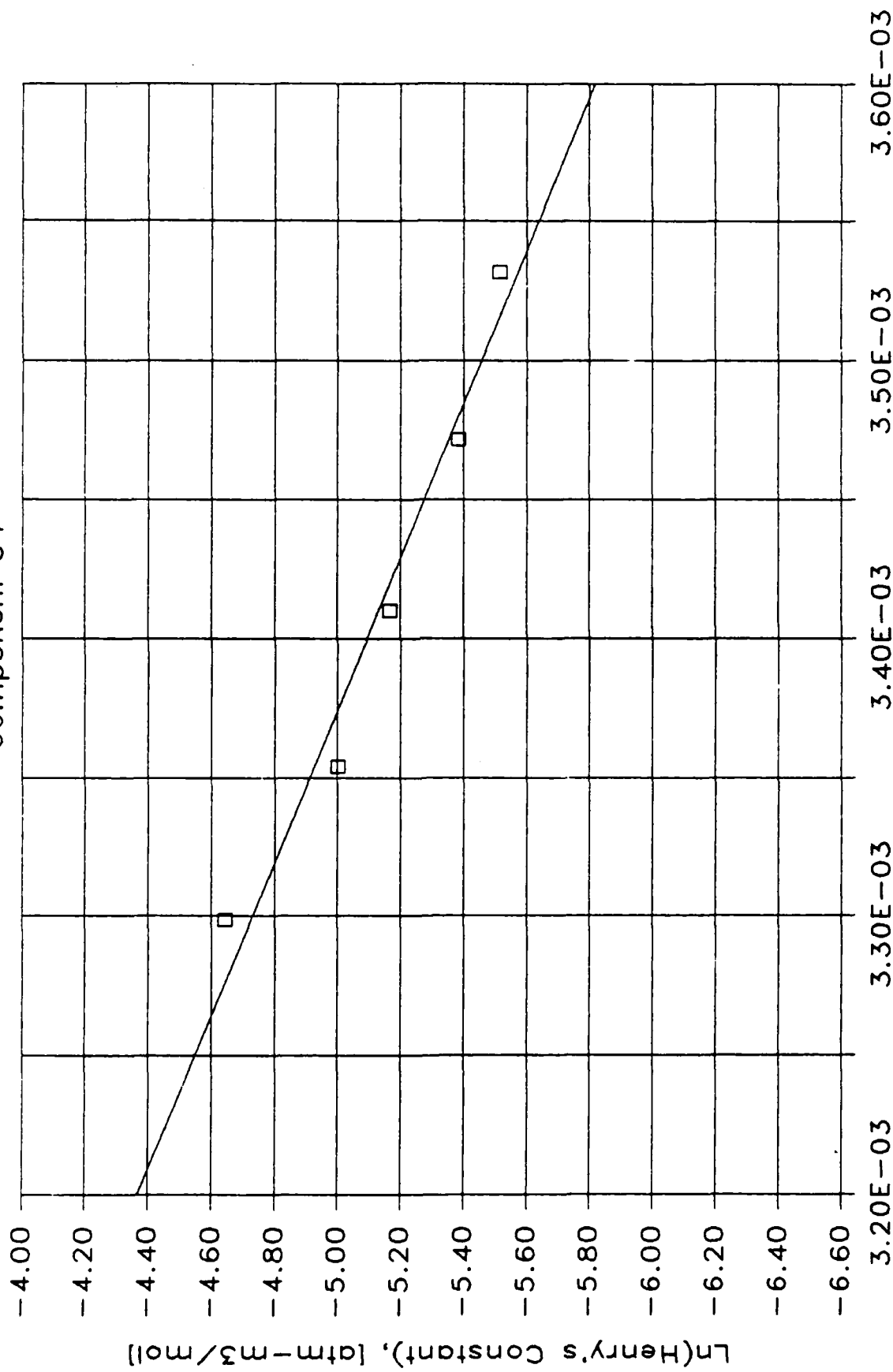
Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9622

Ln(Henry's Constant), [atm-m3/mol]

95% CONFIDENCE TEST

Component 34

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

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REGRESSION CONFIDENCE TEST

Component 34, 95% Confidence
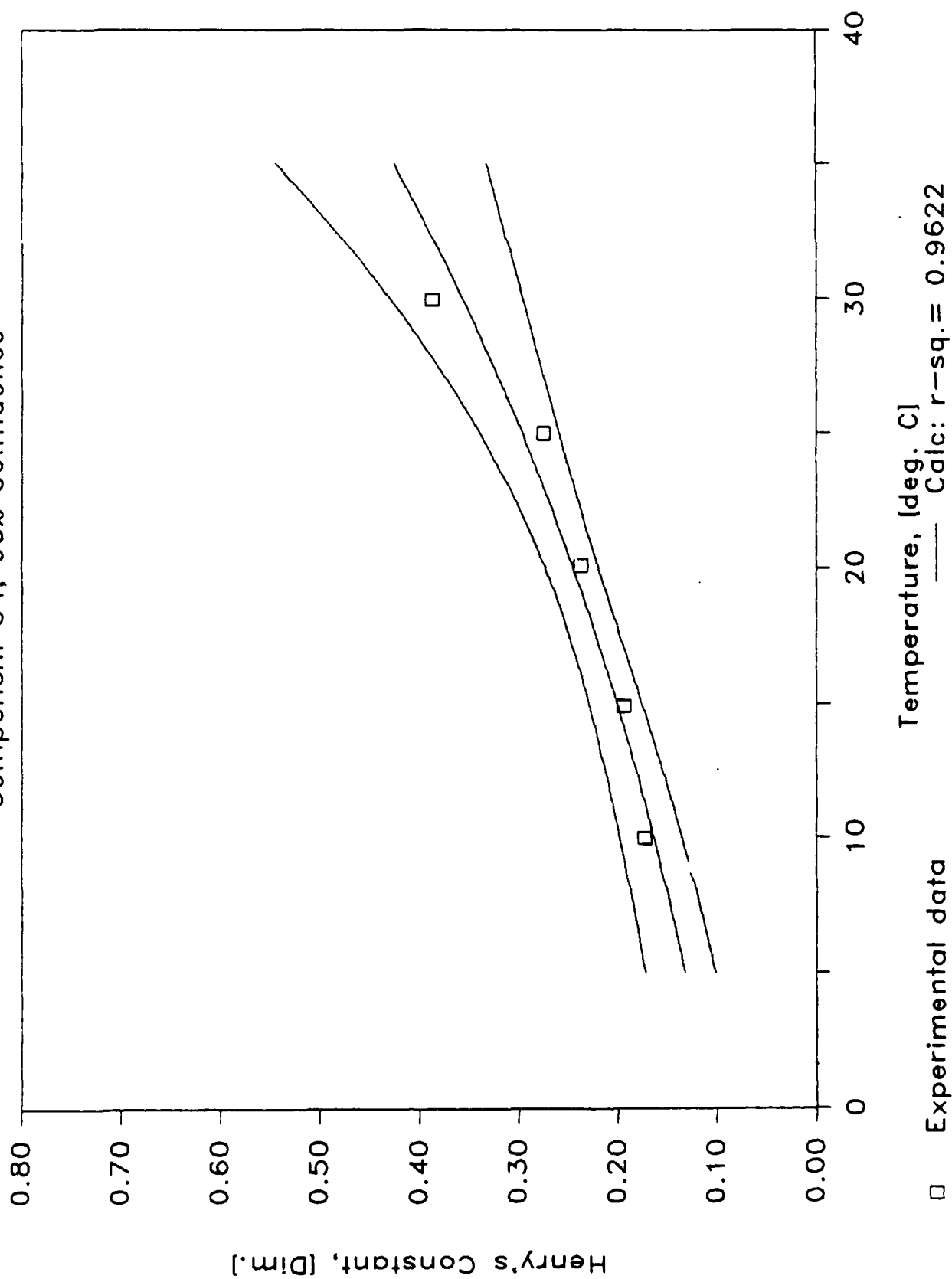
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r−sq.= 0.9622

□ Experimental data

		Temperature 1			Temperature 2			Temperature 3		
RUN Number —)		7			6			7		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		9			9			9		
Component ID		36			36			36		
Temperature (C)		10			15			20		
Low Vol (ml)		25			25			25		
High Vol (ml)		205			205			205		
System Vol (ml)		250			250			250		
H,avg: atm-m3/m3		0.0533	1.0E-25		0.0269	1.0E-25		0.0194	1.0E-25	
H,avg:atm-mol/mol		68.7			35.3			25.9		
H,avg: atm-m3/mol		1.24E-03	1		6.35E-04	1		4.66E-04	1	
H,avg: kPa-m3/mol		0.1254			0.0644			0.0472		
COV, r [std/mean]		45.73			7.01			12.23		
COV, both replic.		———			———			———		
Observation: (1)		0.0733			0.0291			0.0194		
[atm-m3/m3] (2)		0.0754			0.0276			0.0165		
(3)		0.0314			0.0261			0.0223		
(4)		0.0330			0.0247			0.0194		
Injection: (1)		343770			351950			407640		
[Peak Area] (2)		268070			344730			416580		
(3)		1725500			2302300			2858900		
(4)		1707200			2325100			2921100		

	Temperature 4		Temperature 5	
RUN Number ——)	8		7	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2
Group No.	9		9	
Component ID	36		36	
Temperature (C)	25		30	
Low Vol (ml)	25		25	
High Vol (ml)	205		205	
System Vol (ml)	250		250	
H,avg: atm-m3/m3	0.0215	1.0E-25	0.0315	1.0E-25
H,avg:atm-mol/mol	29.3		43.6	
H,avg: atm-m3/mol	5.27E-04	1	7.85E-04	1
H,avg: kPa-m3/mol	0.0534		0.0795	
COV, r [std/mean]	5.30		16.53	
COV, both replic.	——		——	
Observation: (1)	0.0225		0.0370	
[atm-m3/m3] (2)	0.0205		0.0348	
(3)	0.0226		0.0282	
(4)	0.0206		0.0261	
Injection: (1)	493260		884300	
[Peak Area] (2)	493550		833160	
(3)	3380300		5482500	
(4)	3429600		5563600	

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   2.0E+03

Y-INTERCEPT   =   -1.4E+01
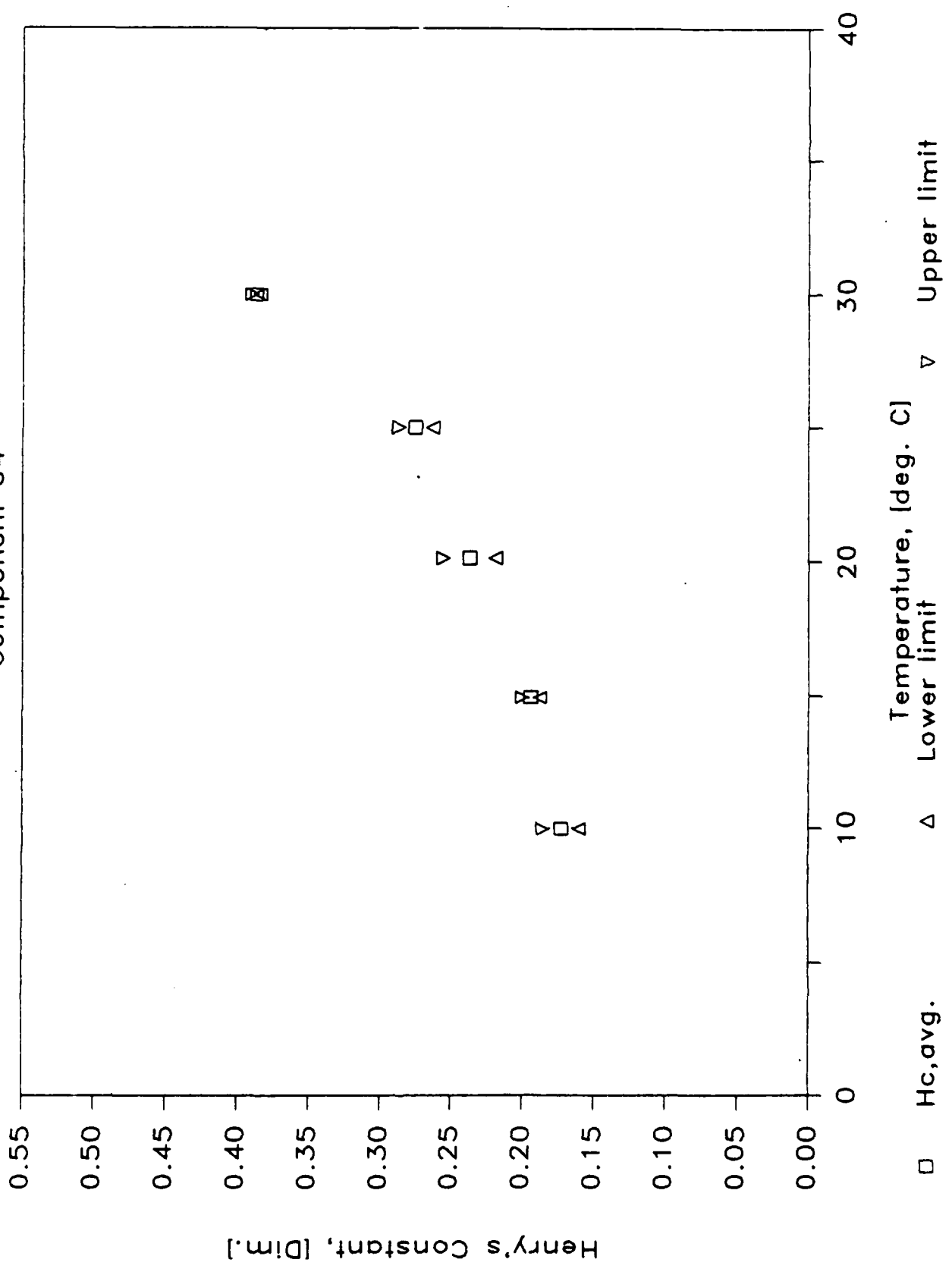
R-SQUARED   =   0.2208

TEMPERATURE REGRESSION PLOT

Component 36

Ln(Henry's Constant), [atm-m3/mol]
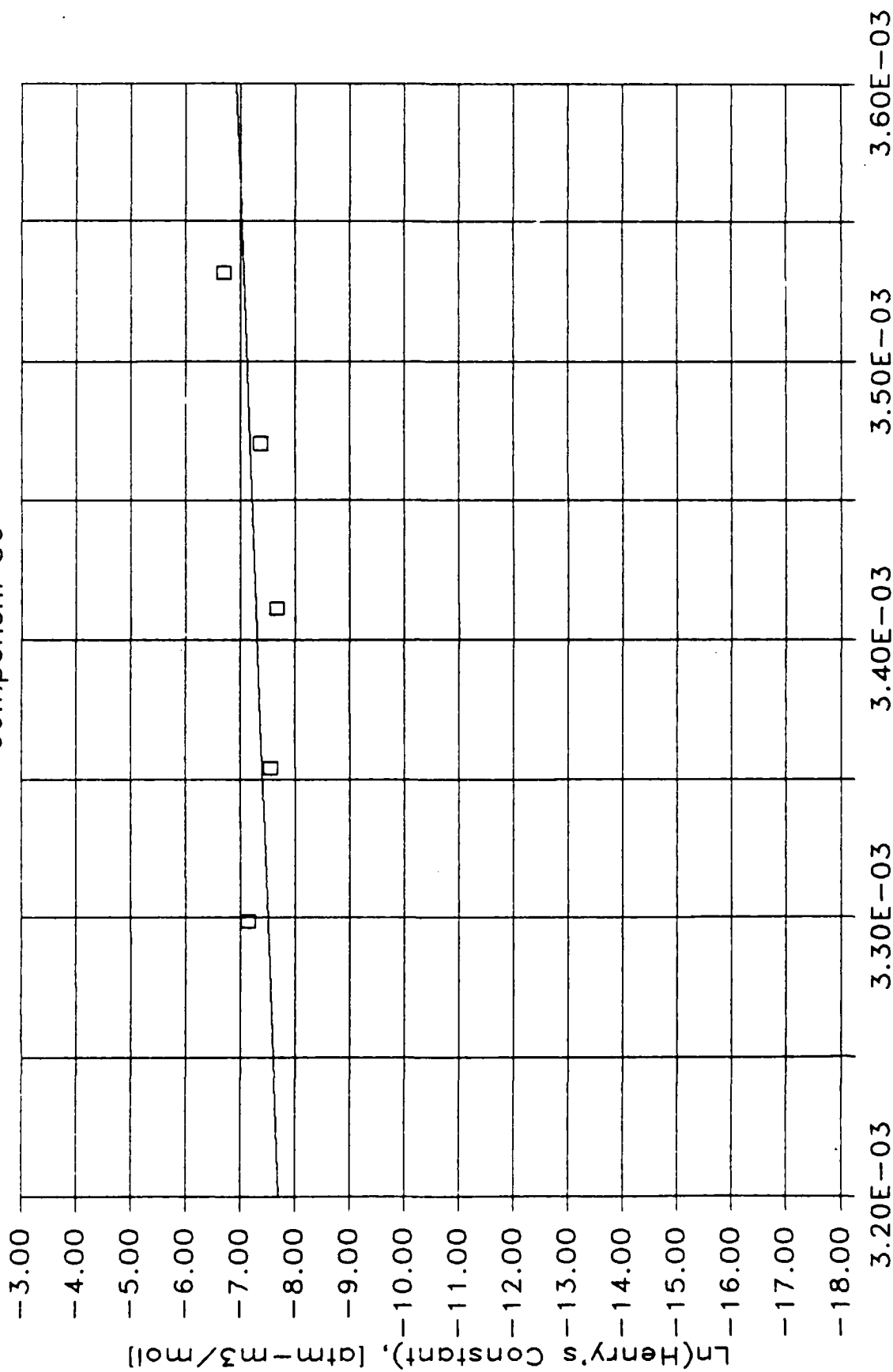
Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.2208

95% CONFIDENCE TEST
Component 36

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit
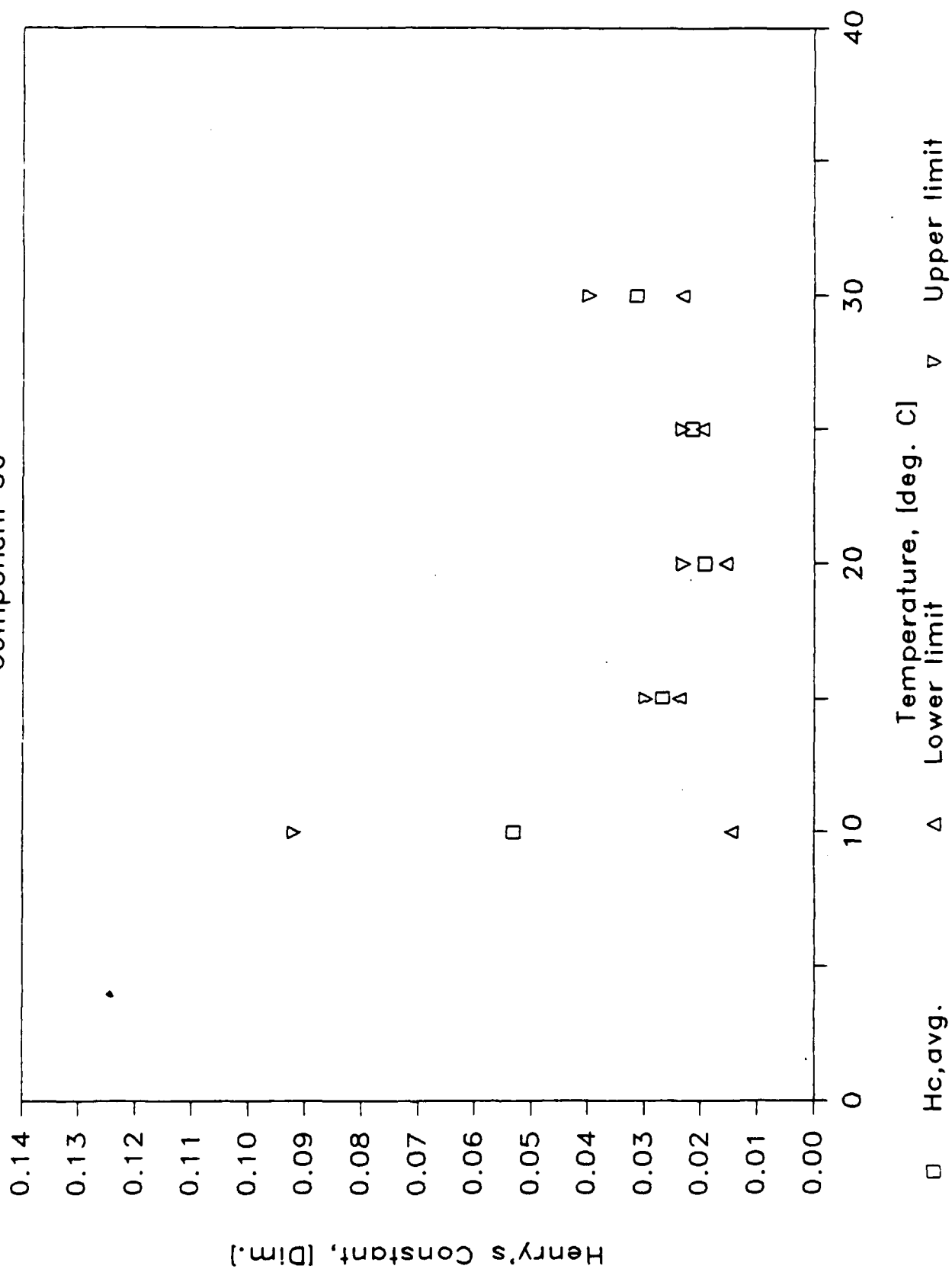
REGRESSION CONFIDENCE TEST

Component 36, 95% Confidence
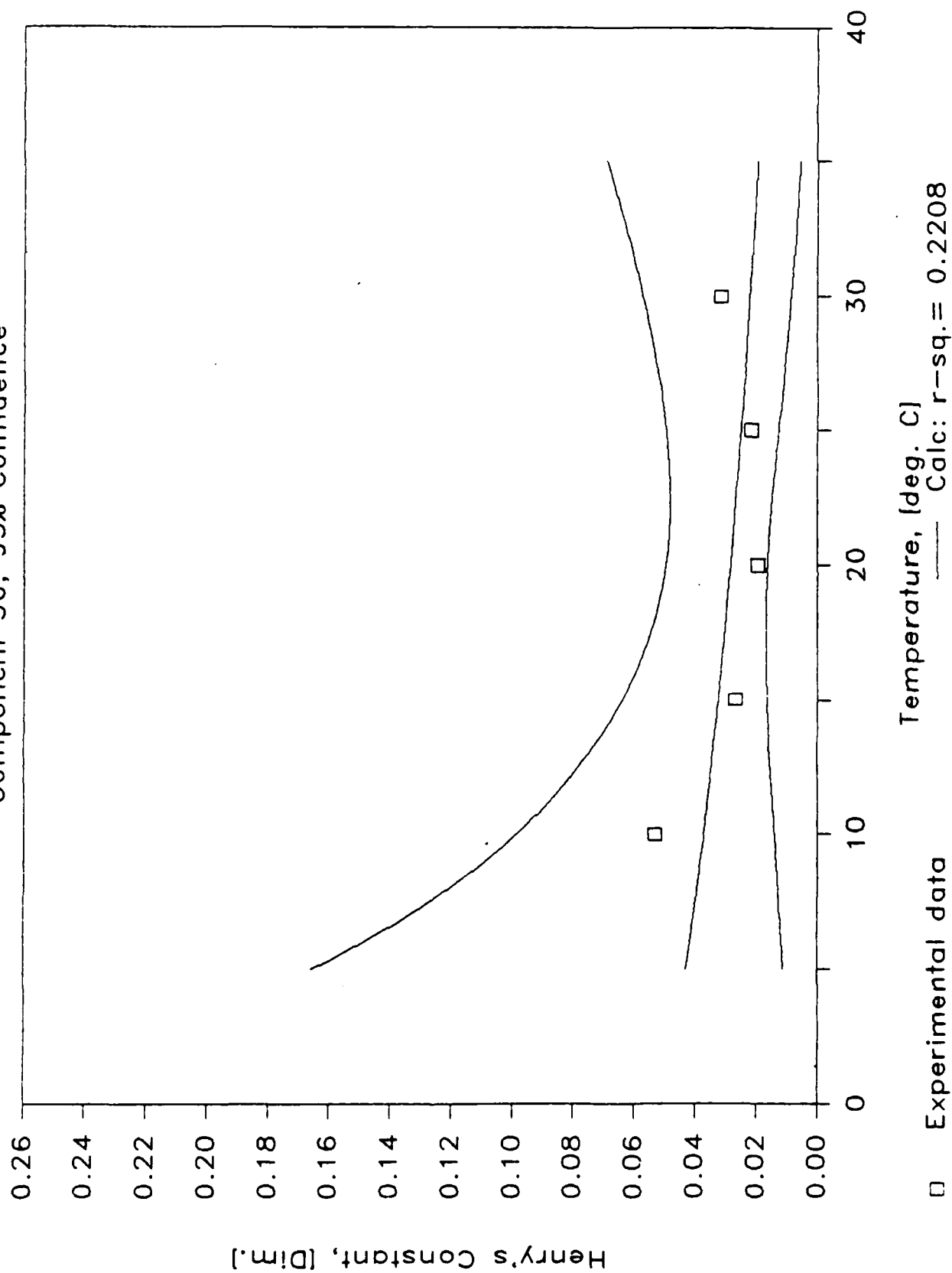
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
—— Calc: r-sq.= 0.2208

		Temperature 1			Temperature 2			Temperature 3		
RUN Number --->		6			6			5		
REPLICATE --->		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		16			16			16		
Component ID		136			136			136		
Temperature (C)		10			15			20.1		
Low Vol (ml)		25			25			25		
High Vol (ml)		205			205			205		
System Vol (ml)		250			250			250		
H,avg: atm-m3/m3		0.0130	1.0E-25		0.0202	1.0E-25		0.0252	1.0E-25	
H,avg:atm-mol/mol		16.8			26.5			33.6		
H,avg: atm-m3/mol		3.02E-04	1		4.77E-04	1		6.06E-04	1	
H,avg: kPa-m3/mol		0.0306			0.0483			0.0614		
COV, r [std/mean]		33.19			49.30			52.61		
COV, both replic.		------			------			------		
Observation: (1)		0.0155			0.0237			0.0383		
[atm-m3/m3] (2)		0.0177			0.0320			0.0349		
(3)		0.0084			0.0088			0.0152		
(4)		0.0104			0.0162			0.0124		
Injection: (1)		92157			78050			111140		
[Peak Area] (2)		87113			69678			94494		
(3)		665330			530380			683640		
(4)		654440			500410			699000		

		Temperature 4		Temperature 5	
RUN Number ---)		7		7	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		16		16	
Component ID		136		136	
Temperature (C)		25.1		30	
Low Vol (ml)		25		25	
High Vol (ml)		205		205	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0267	1.0E-25	0.0320	1.0E-25
H, avg:atm-mol/mol		36.2		44.2	
H, avg: atm-m3/mol		6.53E-04	1	7.96E-04	1
H, avg: kPa-m3/mol		0.0662		0.0806	
COV, r [std/mean]		5.41		7.28	
COV, both replic.		———		———	
Observation:	(1)	0.0283		0.0342	
[atm-m3/m3]	(2)	0.0259		0.0339	
	(3)	0.0275		0.0301	
	(4)	0.0251		0.0298	
Injection:	(1)	118950		246060	
[Peak Area]	(2)	118320		239450	
	(3)	782460		1554800	
	(4)	795690		1558000	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -3.9E+03

Y-INTERCEPT   =   5.7E+00

R-SQUARED   =   0.9281

TEMPERATURE REGRESSION PLOT

Component 136

Ln(Henry's Constant), [atm-m3/mol]
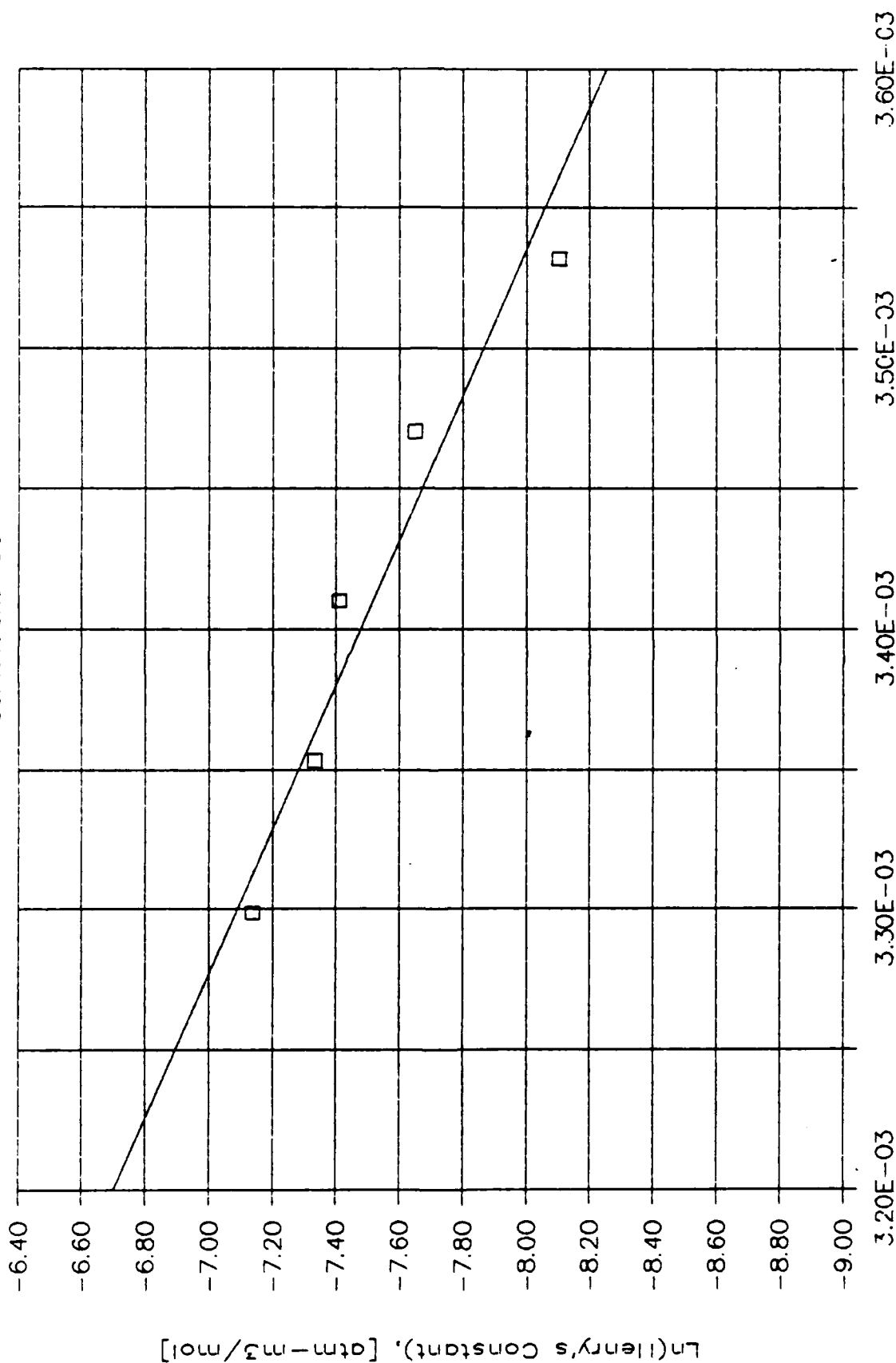
Reciprocal Temperature, [1/K]

□   Experimental data

——   Regr: r-sq.= 0.9281

95% CONFIDENCE TEST

Component 136

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
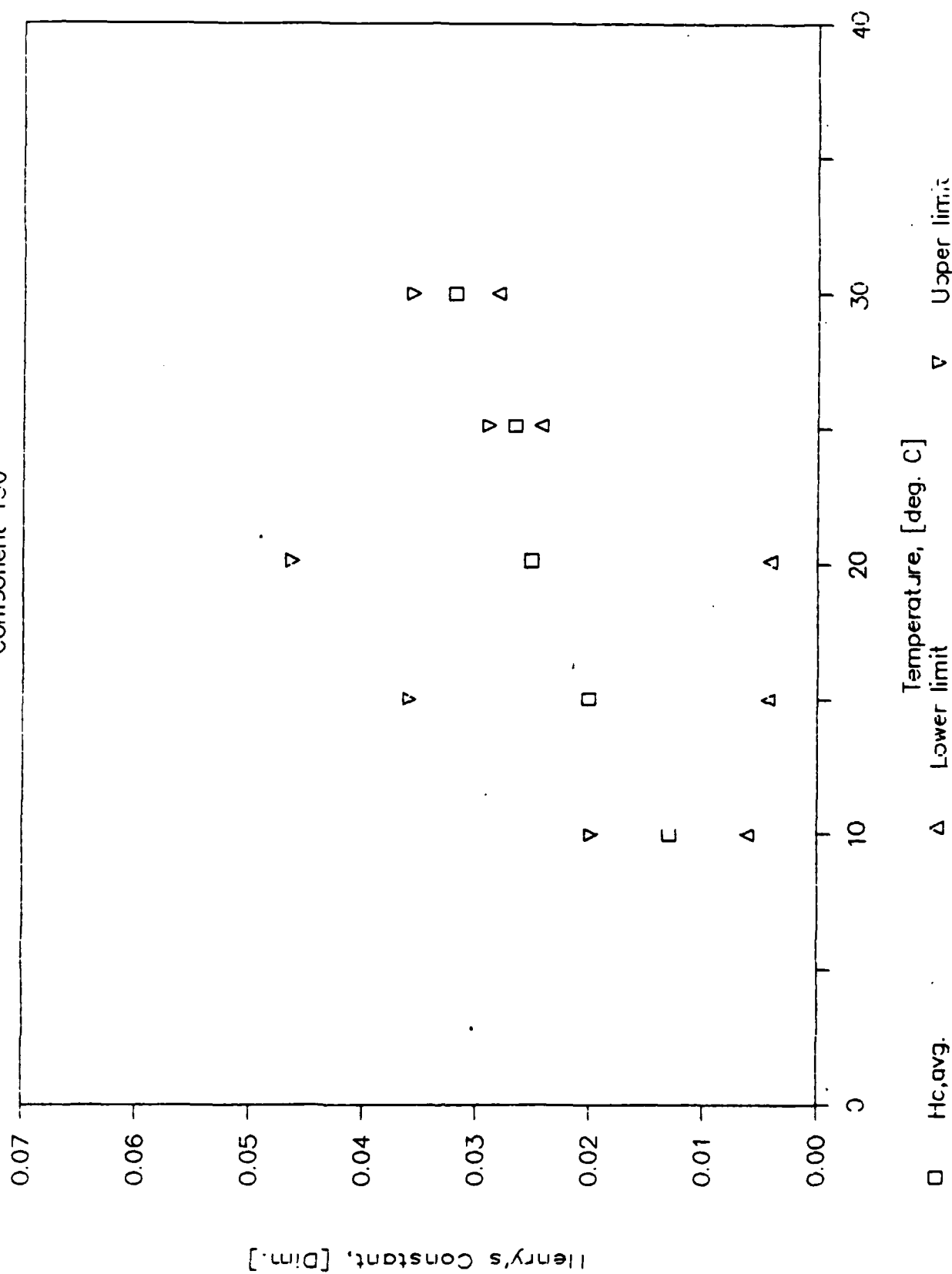
REGRESSION CONFIDENCE TEST

Component 136, 95% Confidence
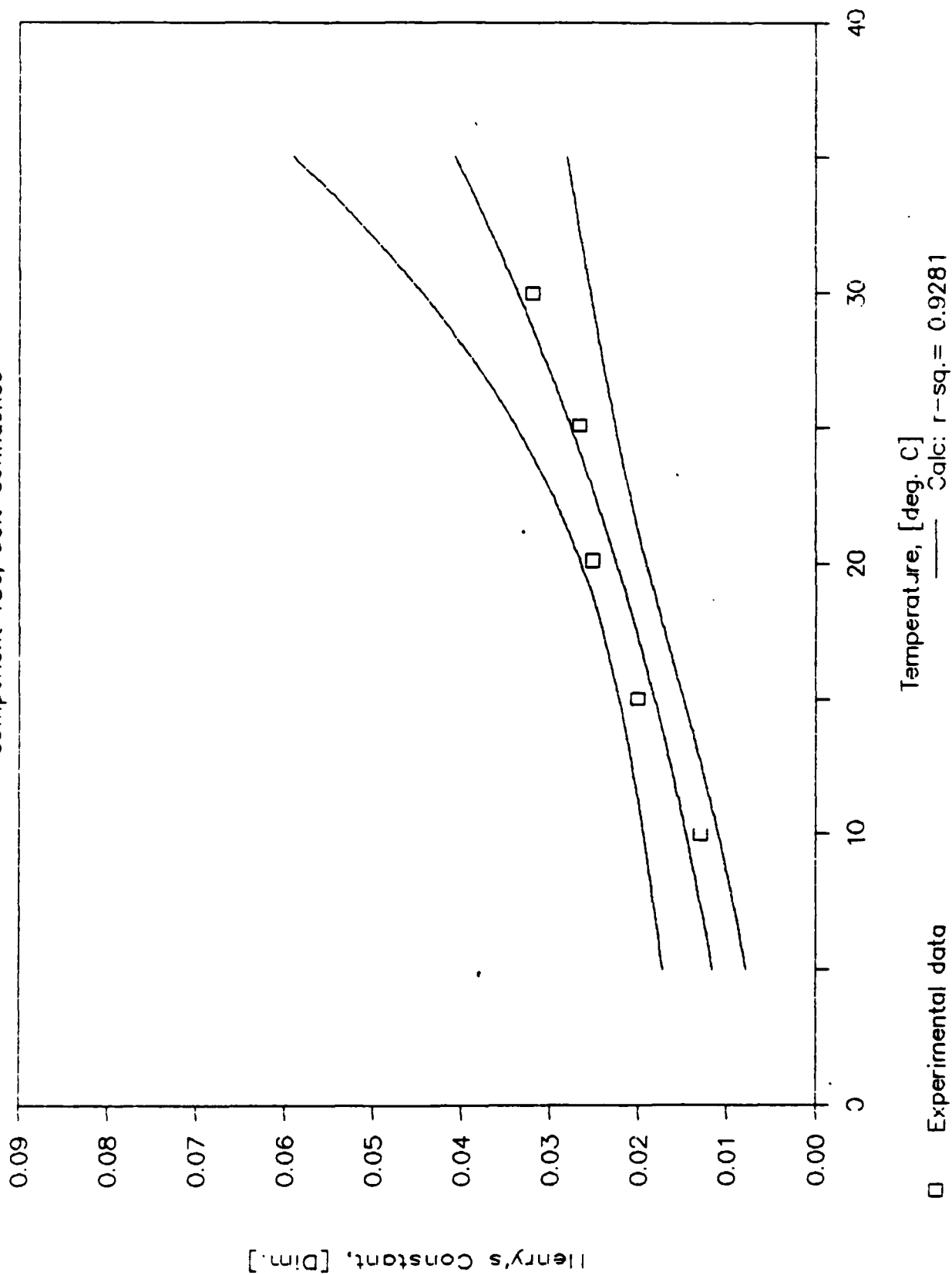
Henry's Constant, [Dim.]

Temperature, [deg. C]

Calc: r-sq.= 0.9281

Experimental data

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	11		10		11	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	9		9		9	
Component ID	37		37		37	
Temperature (C)	10		15		20	
Low Vol (ml)	25		25		25	
High Vol (ml)	205		205		205	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.6617	1.0E-25	0.8583	1.0E-25	0.9048	1.0E-25
H,avg:atm-mol/mol	853.5		1126.5		1208.1	
H,avg: atm-m3/mol	1.54E-02	1	2.03E-02	1	2.18E-02	1
H,avg: kPa-m3/mol	1.5580		2.0564		2.2054	
COV, r [std/mean]	3.41		17.22		3.09	
COV, both replic.	-----		-----		-----	
Observation: (1)	0.6769		0.8978		0.9007	
[atm-m3/m3] (2)	0.6388		0.6926		0.8711	
(3)	0.6849		1.0410		0.9392	
(4)	0.6464		0.8018		0.9082	
Injection: (1)	3238100		2870500		3572000	
[Peak Area] (2)	3266200		3194000		3681700	
(3)	4300400		3103100		3852300	
(4)	4485900		3748700		3947100	

		Temperature 4		Temperature 5		
RUN Number ----)		12		11		
REPLICATE ----)		No. 1	No. 2	No. 1	No. 2	
Group No.		9		9		
Component ID		37		37		
Temperature (C)		25		30		
Low Vol (ml)		25		25		
High Vol (ml)		205		205		
System Vol (ml)		250		250		
H, avg: atm-m3/m3		1.0571	1.0E-25	1.2767	1.0E-25	
H, avg: atm-mol/mol		1435.5		1762.8		
H, avg: atm-m3/mol		2.59E-02	1	3.18E-02	1	
H, avg: kPa-m3/mol		2.6205		3.2180		
COV, r [std/mean]		2.67		0.89		
COV, both replic.		------		------		
Observation:	(1)	1.0695		1.2895		
[atm-m3/m3]	(2)	1.0895		1.2711		
	(3)	1.0251		1.2822		
	(4)	1.0442		1.2639		
Injection:	(1)	5147500		2865300		
[Peak Area]	(2)	4993300		2853900		
	(3)	4905100		2391500		
	(4)	4840500		2415700		

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-2.9E+03
Y-INTERCEPT	=	6.1E+00
R-SQUARED	=	0.9735

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TEMPERATURE REGRESSION PLOT

Component 37

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.9735

95% CONFIDENCE TEST

Component 37

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit
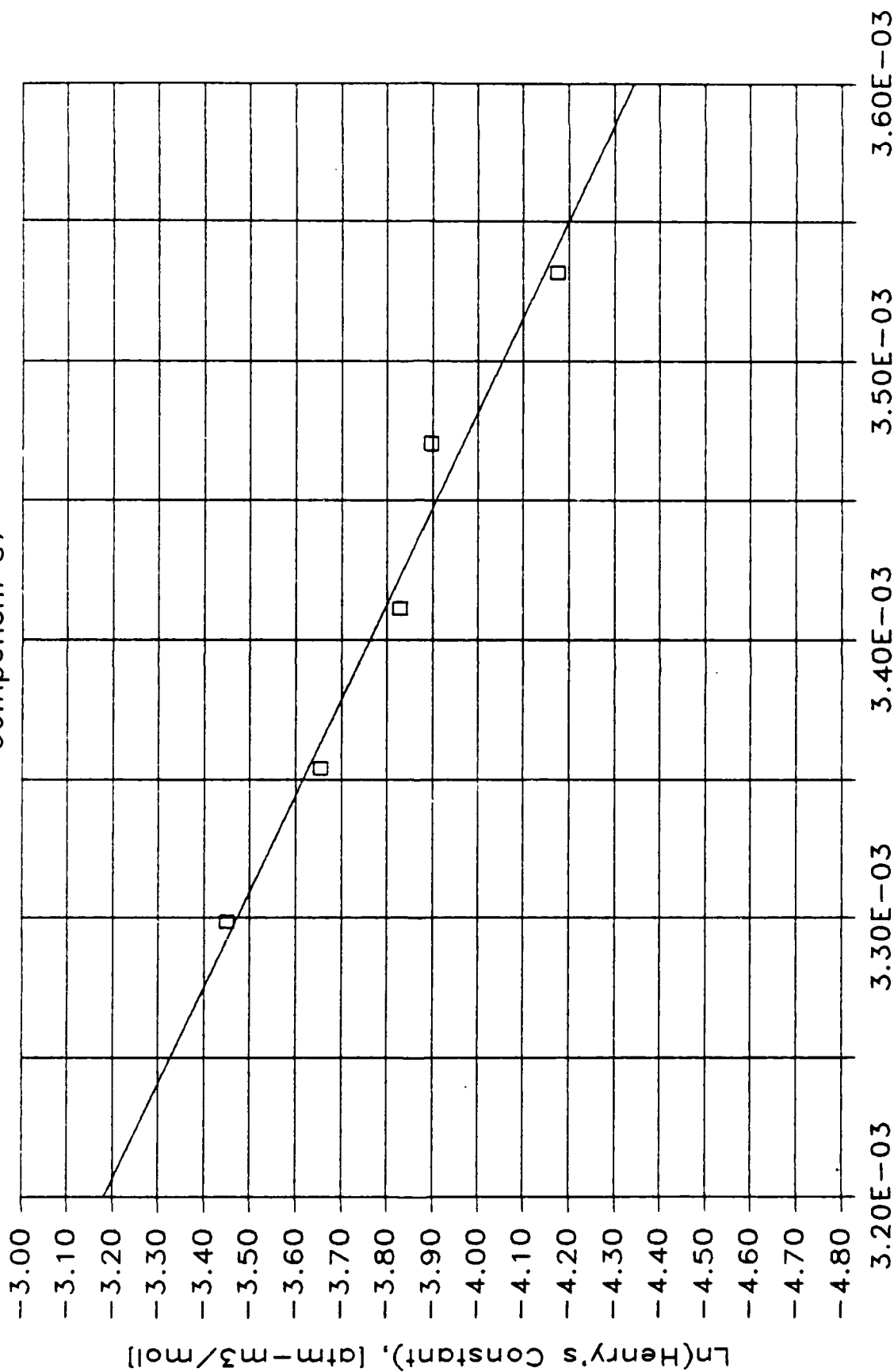
REGRESSION CONFIDENCE TEST

Component 37, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

Calc.: r-sq.= 0.9735

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	9		24		39	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	17		17		17	
Component ID	43		43		43	
Temperature (C)	10.1		15.1		19.5	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.0142	1.0E-25	0.0084	1.0E-25	0.0305	1.0E-25
H, avg: atm-mol/mol	18.4		11.0		40.7	
H, avg: atm-m3/mol	3.31E-04	1	1.98E-04	1	7.33E-04	1
H, avg: kPa-m3/mol	0.0335		0.0201		0.0743	
COV, r [std/mean]	45.57		53.06		34.56	
COV, both replic.	———		———		———	
Observation: (1)	0.0199		0.0055		0.0387	
[atm-m3/m3] (2)	0.0198		0.0131		0.0405	
(3)	0.0087		0.0038		0.0206	
(4)	0.0086		0.0112		0.0222	
Injection: (1)	25478		34888		60686	
[Peak Area] (2)	22974		34282		52513	
(3)	201340		315460		412400	
(4)	201500		293250		406750	

		Temperature 4			Temperature 5	
RUN Number —)		25			10	
REPLICATE —)		No. 1	No. 2		No. 1	No. 2
Group No.		17		•|	17	
Component ID		43			43	
Temperature (C)		25.1			30.5	
Low Vol (ml)		21			21	
High Vol (ml)		201			201	
System Vol (ml)		250			250	
H, avg: atm-m3/m3		0.0102	1.0E-25		0.0281	1.0E-25
H, avg:atm-mol/mol		13.9			38.8	
H, avg: atm-m3/mol		2.50E-04	1		7.00E-04	1
H, avg: kPa-m3/mol		0.0253			0.0709	
COV, r [std/mean]		86.05			56.56	
COV, both replic.		——			——	
Observation: (1)		0.0201			0.0228	
[atm-m3/m3] (2)		0.0147			0.0477	
(3)		0.0054			0.0099	
(4)		0.0007			0.0319	
Injection: (1)		66222			81869	
[Peak Area] (2)		57695			72903	
(3)		522440			631150	
(4)		548100			521520	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -2.8E+03

Y-INTERCEPT   =   1.7E+00

R-SQUARED   =   0.1940
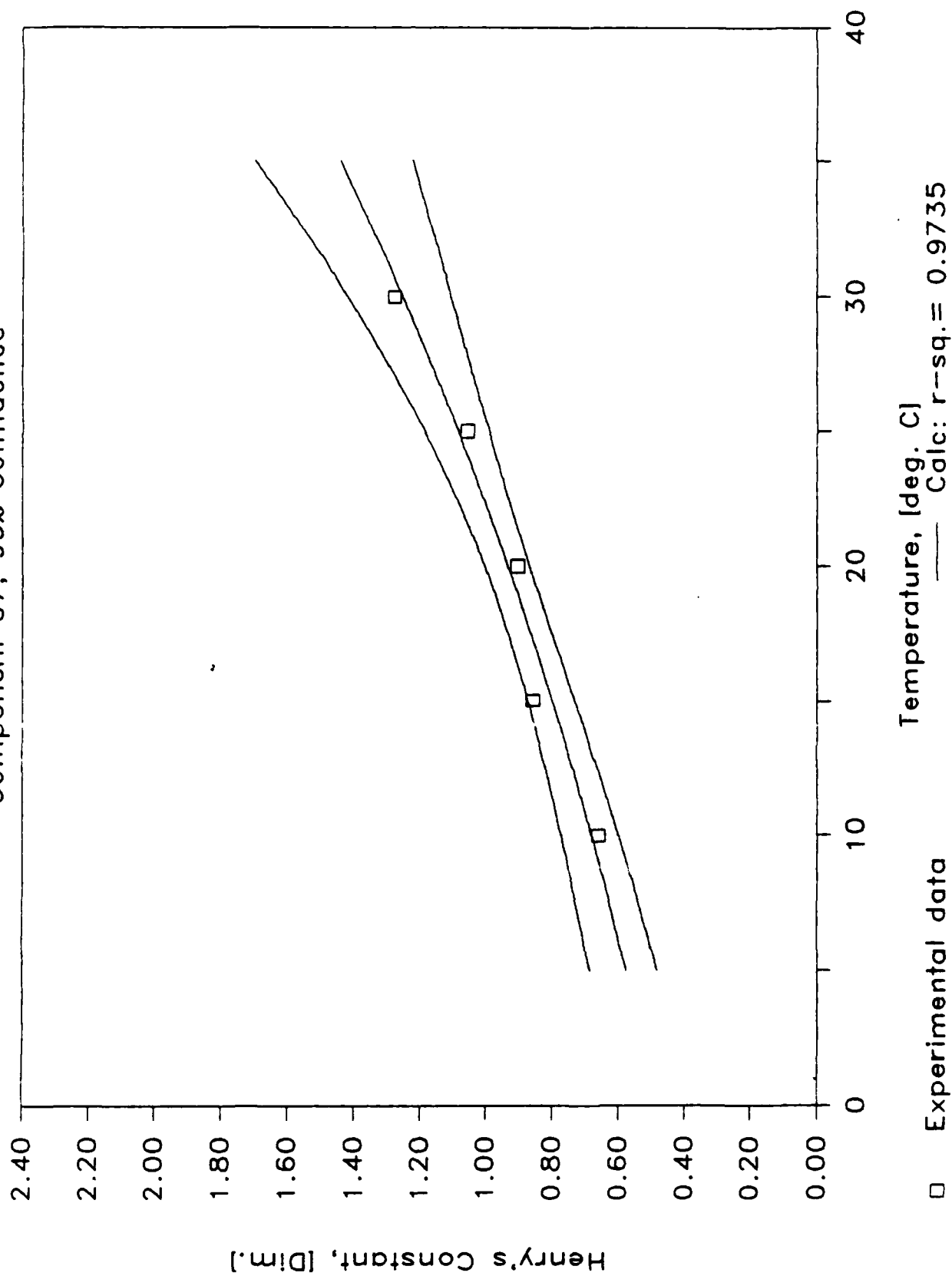
TEMPERATURE REGRESSION PLOT

Component 43
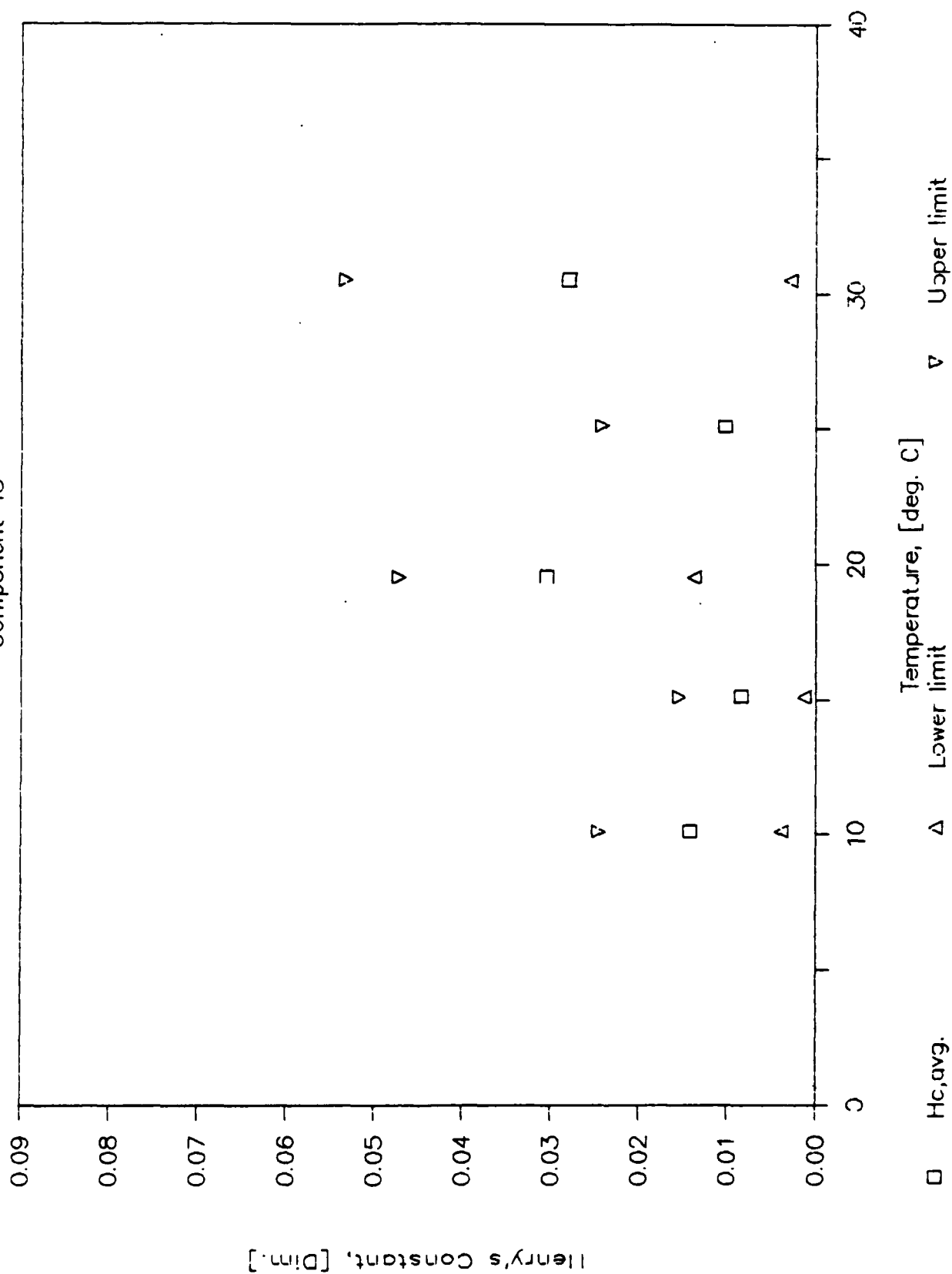
95% CONFIDENCE TEST

Component 43

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit

REGRESSION CONFIDENCE TEST

Component 43, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

——— Calc: r-sq.= 0.194
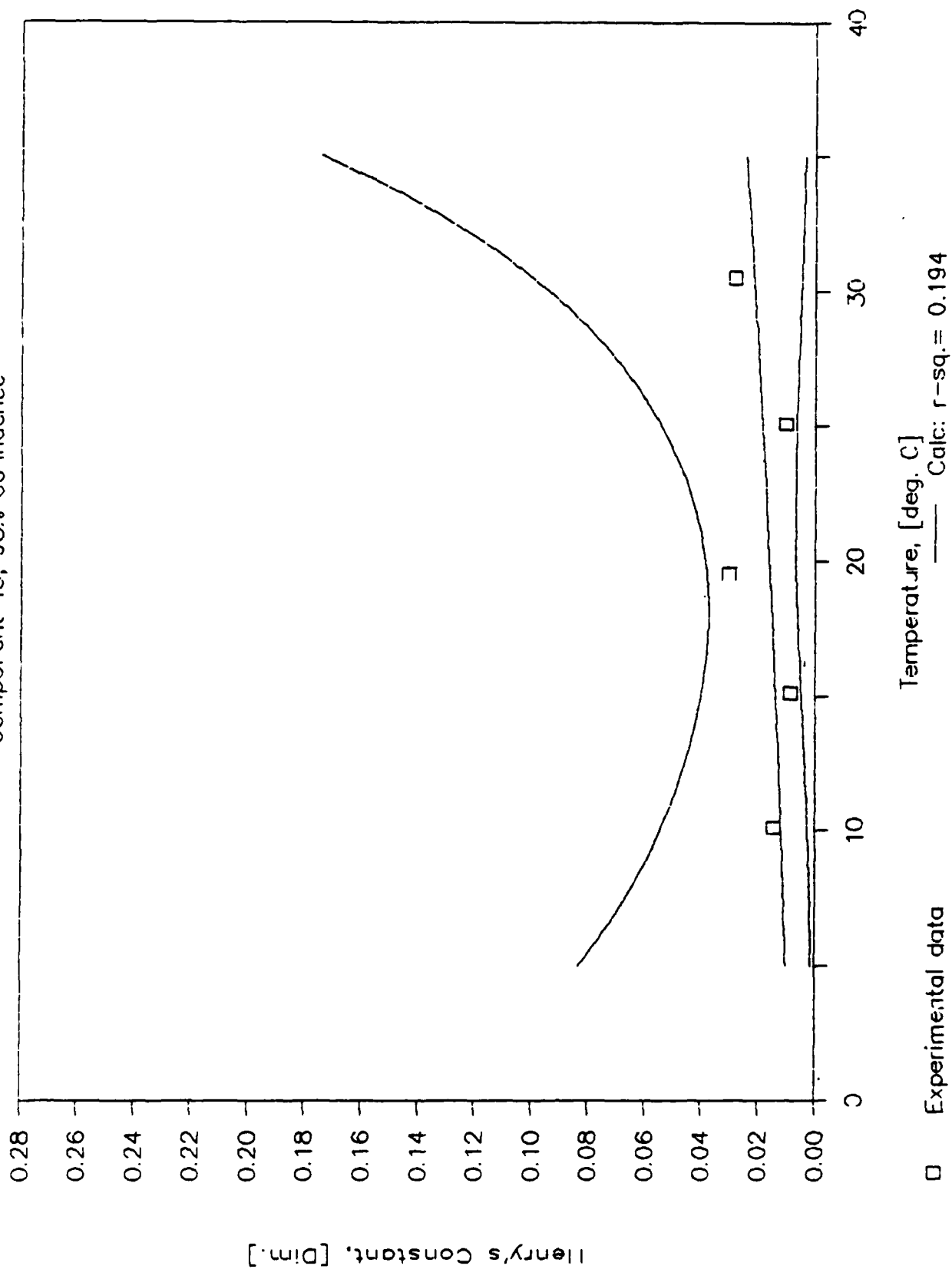
	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	14		28		44	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	17		17		17	
Component ID	44		44		44	
Temperature (C)	10.1		15.1		19.5	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.0526	1.0E-25	0.0535	1.0E-25	0.0792	1.0E-25
H,avg:atm-mol/mol	67.9		70.2		105.5	
H,avg: atm-m3/mol	1.22E-03	1	1.26E-03	1	1.90E-03	1
H,avg: kPa-m3/mol	0.1240		0.1281		0.1926	
COV, r [std/mean]	1.12		9.54		6.49	
COV, both replic.	-----		-----		-----	
Observation: (1)	0.0531		0.0540		0.0842	
[atm-m3/m3] (2)	0.0521		0.0597		0.0753	
(3)	0.0532		0.0473		0.0829	
(4)	0.0522		0.0527		0.0742	
Injection: (1)	82750		104390		170130	
[Peak Area] (2)	82819		99727		168970	
(3)	508140		636940		866350	
(4)	511610		613860		910340	

			Temperature 4			Temperature 5	
RUN Number	—→		29			15	
REPLICATE	—→		No. 1	No. 2		No. 1	No. 2
Group No.			17			17	
Component ID			44			44	
Temperature (C)			25.1			30.15	
Low Vol (ml)			21			21	
High Vol (ml)			201			201	
System Vol (ml)			250			250	
H, avg: atm-m3/m3			0.1460	1.0E-25		0.1151	1.0E-25
H, avg: atm-mol/mol			198.4			158.9	
H, avg: atm-m3/mol			3.57E-03	1		2.86E-03	1
H, avg: kPa-m3/mol			0.3621			0.2901	
COV, r [std/mean]			26.57			15.31	
COV, both replic.			———			———	
Observation:	(1)		0.1717			0.1047	
[atm-m3/m3]	(2)		0.1863			0.0963	
	(3)		0.1076			0.1345	
	(4)		0.1185			0.1248	
Injection:	(1)		233090			184350	
[Peak Area]	(2)		179070			210840	
	(3)		809300			845020	
	(4)		769370			880690	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$\#$ OF POINTS   =   5

SLOPE   =   -4.7E+03

Y-INTERCEPT   =   9.8E+00

R-SQUARED   =   0.8203

TEMPERATURE REGRESSION PLOT

Component 44

Reciprocal Temperature, [1/K]

Ln(Henry's Constant), [atm-m3/mol]

□ Experimental data

—— Regr: r-sq.= 0.8203
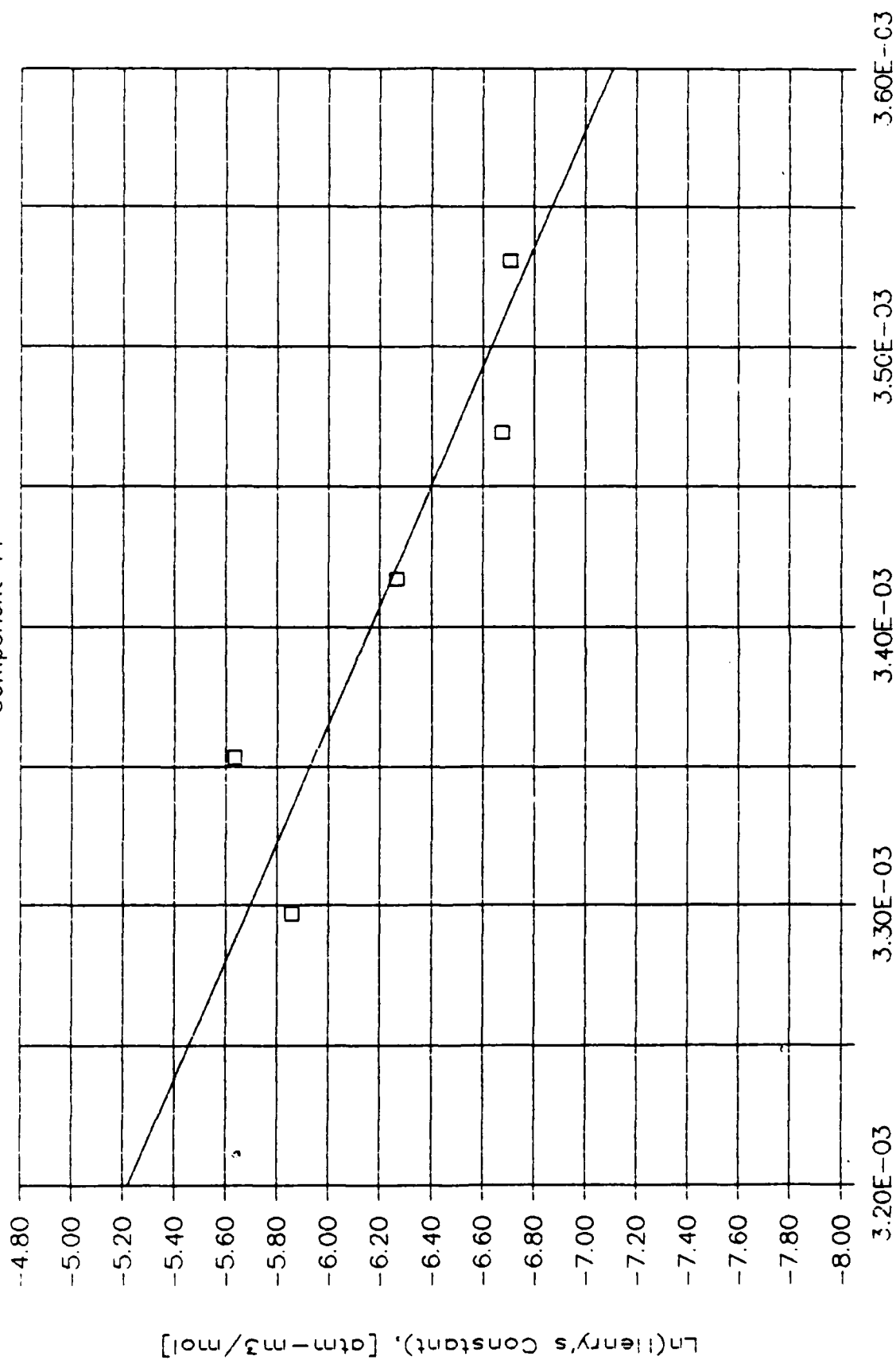
95% CONFIDENCE TEST
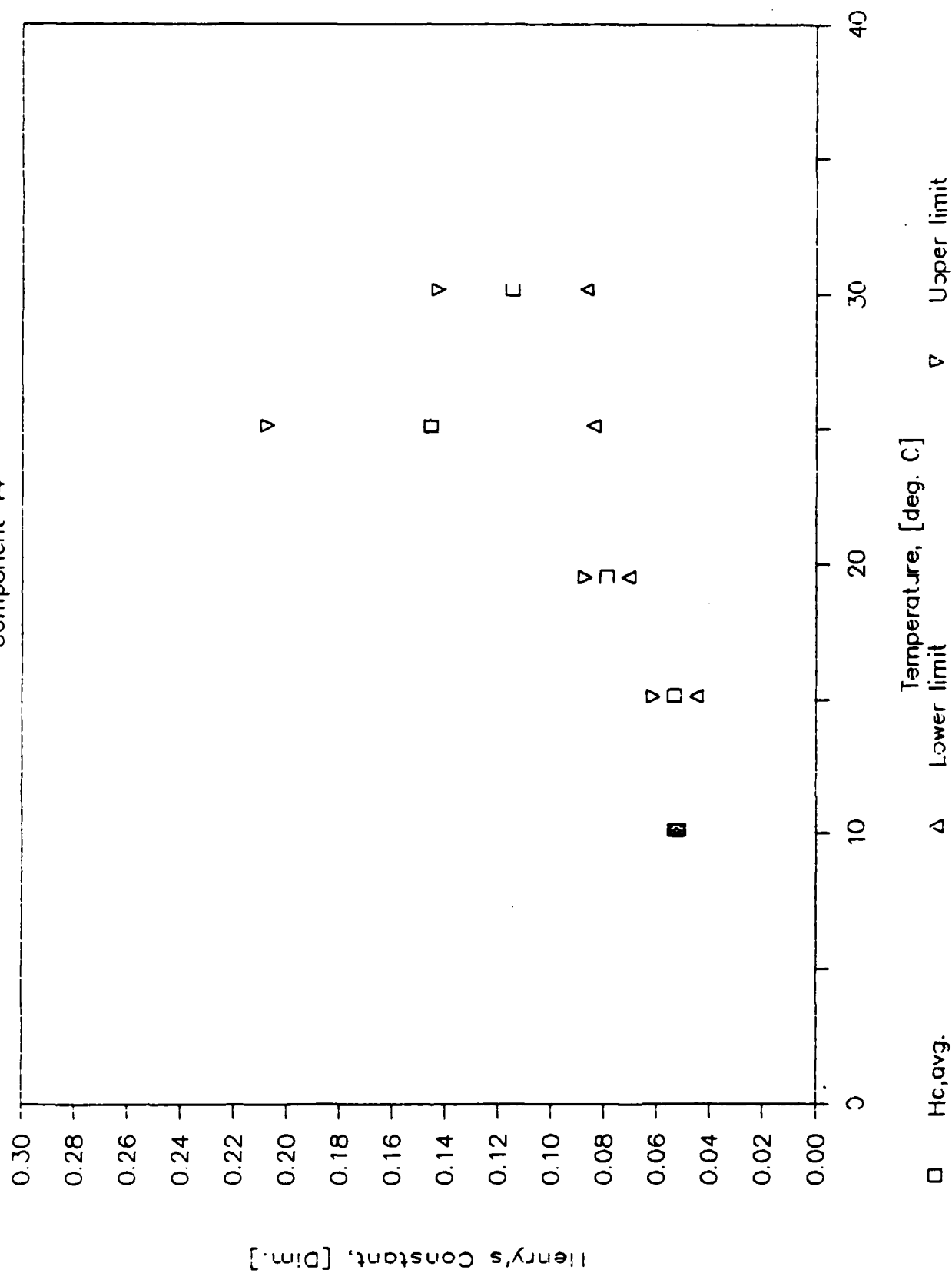
Component 44

REGRESSION CONFIDENCE TEST

Component 44, 95% Confidence
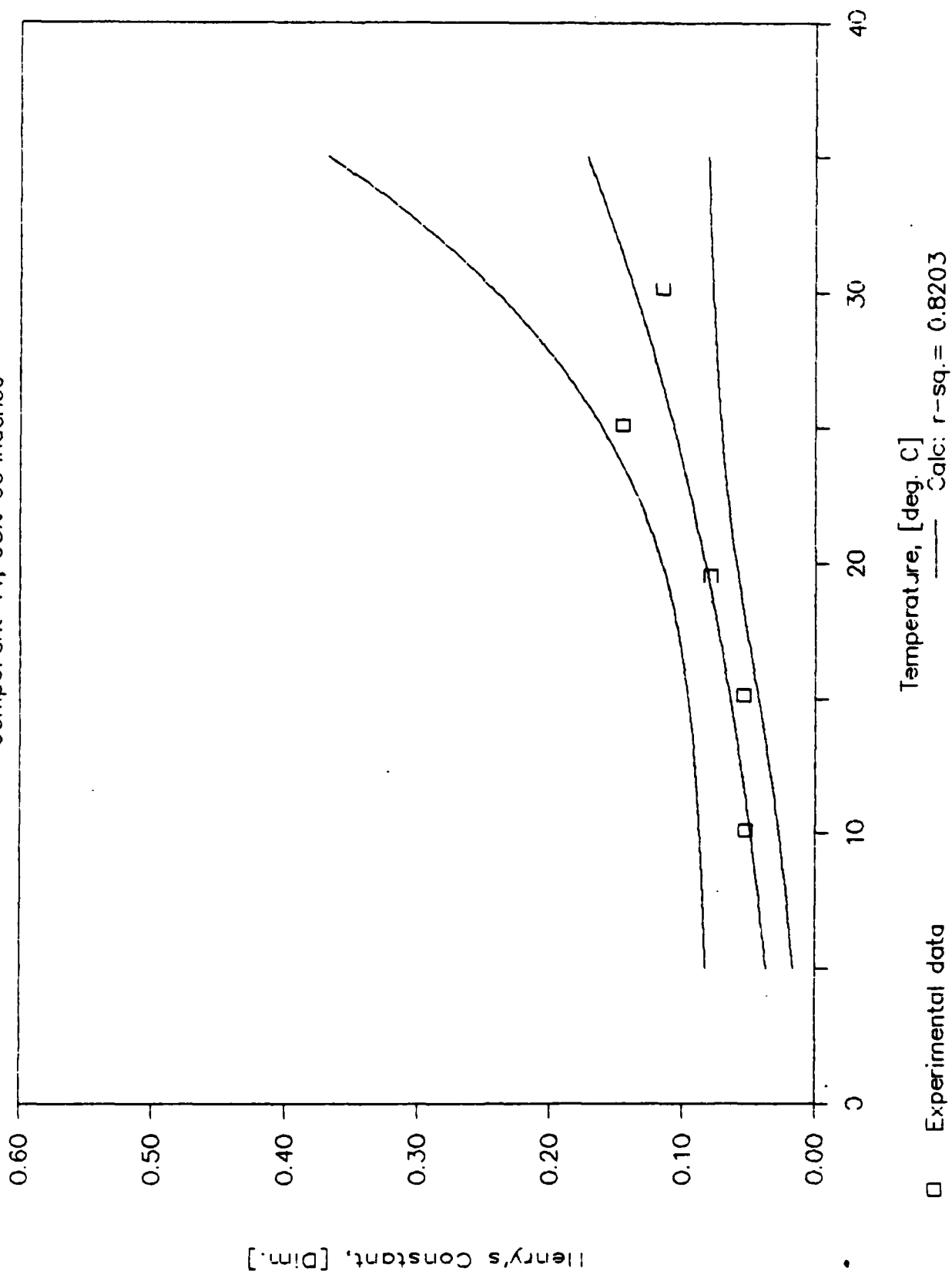
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.8203

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ——)	19		33		51	
REPLICATE ——)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	17		17		17	
Component ID	45		45		45	
Temperature (C)	10.1		15.1		19.5	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.0163	1.0E-25	0.0192	1.0E-25	0.0430	1.0E-25
H, avg:atm-mol/mol	21.0		25.2		57.3	
H, avg: atm-m3/mol	3.78E-04	1	4.55E-04	1	1.03E-03	1
H, avg: kPa-m3/mol	0.0383		0.0461		0.1046	
COV, r [std/mean]	33.91		37.20		6.20	
COV, both replic.	———		———		———	
Observation: (1)	0.0229		0.0272		0.0462	
[atm-m3/m3] (2)	0.0176		0.0229		0.0423	
(3)	0.0147		0.0153		0.0436	
(4)	0.0098		0.0114		0.0398	
Injection: (1)	53259		72470		110860	
[Peak Area] (2)	49525		65405		108820	
(3)	410040		538410		713530	
(4)	429430		558140		733410	

		Temperature 4		Temperature 5	
RUN Number ---)		35		20	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		17		17	
Component ID		45		45	
Temperature (C)		25.1		30.15	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0483	1.0E-25	0.0612	1.0E-25
H, avg: atm-mol/mol		65.6		84.5	
H, avg: atm-m3/mol		1.18E-03	1	1.52E-03	1
H, avg: kPa-m3/mol		0.1197		0.1542	
COV, r [std/mean]		2.72		4.22	
COV, both replic.		-----		-----	
Observation:	(1)	0.0496		0.0595	
[atm-m3/m3]	(2)	0.0474		0.0638	
	(3)	0.0491		0.0585	
	(4)	0.0469		0.0628	
Injection:	(1)	127970		158860	
[Peak Area]	(2)	127550		157860	
	(3)	804470		935680	
	(4)	816920		910360	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} \quad = \quad 5$$

$$\text{SLOPE} \quad = \quad -6.4E+03$$

$$\text{Y-INTERCEPT} \quad = \quad 1.5E+01$$

$$\text{R-SQUARED} \quad = \quad 0.9136$$

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TEMPERATURE REGRESSION PLOT

Component 45
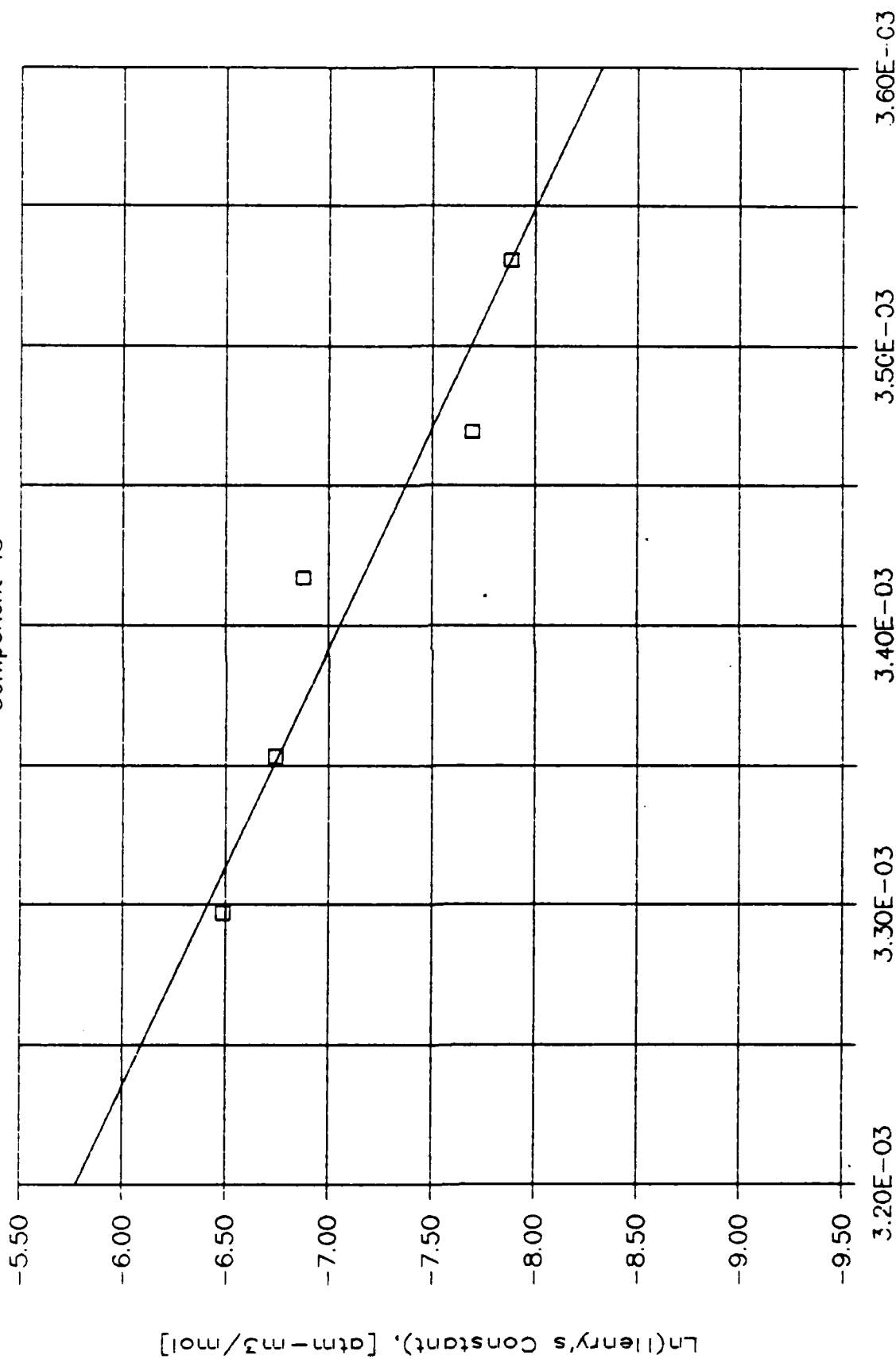
Recip·ccal Temperature, [1/K]

—— Regr: r–sq.= 0.9136

Ln(Henry's Constant), [atm–m3/mol]

□ E×perimental data

95% CONFIDENCE TEST

Component 45

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

REGRESSION CONFIDENCE TEST

Component 45, 95% Confidence

Temperature, [deg. C]

Henry's Constant, [Dim.]

□   Experimental data

——   Calc: r-sq.= 0.9136

		Temperature 1			Temperature 2			Temperature 3		
RUN Number —)	I	34		I	39		I	5		I
REPLICATE —)	I	No. 1	No. 2	I	No. 1	No. 2	I	No. 1	No. 2	I
	I			I			I			I
Group No.	I	18		I	18		I	18		I
Component ID	I	46		I	46		I	46		I
Temperature (C)	I	10.7		I	15		I	20.2		I
Low Vol (ml)	I	30		I	30		I	30		I
High Vol (ml)	I	210		I	210		I	210		I
System Vol (ml)	I	250		I	250		I	250		I
	I			I			I			I
H, avg: atm-m3/m3	I	0.0553	1.0E-25	I	0.0446	1.0E-25	I	0.0759	1.0E-25	I
H, avg:atm-mol/mol	I	71.5		I	58.5		I	101.5		I
H, avg: atm-m3/mol	I	1.29E-03	1	I	1.05E-03	1	I	1.83E-03	1	I
H, avg: kPa-m3/mol	I	0.1305		I	0.1068		I	0.1852		I
COV, r [std/mean]	I	39.03		I	51.33		I	7.21		I
COV, both replic.	I	——		I	——		I	——		I
Observation: (1)	I	0.0678		I	0.0486		I	0.0711		I
[atm-m3/m3] (2)	I	0.0788		I	0.0732		I	0.0713		I
(3)	I	0.0328		I	0.0181		I	0.0806		I
(4)	I	0.0418		I	0.0385		I	0.0808		I
	I			I			I			I
Injection: (1)	I	70189		I	88227		I	121130		I
[Peak Area] (2)	I	58535		I	74110		I	126440		I
(3)	I	332420		I	459570		I	564880		I
(4)	I	316050		I	407560		I	564380		I
	I			I			I			I

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		Temperature 4		Temperature 5	
RUN Number ——)		40		35	
REPLICATE ——)		No. 1	No. 2	No. 1	No. 2
Group No.		18		18	
Component ID		46		46	
Temperature (C)		25.2		30	
Low Vol (ml)		30		30	
High Vol (ml)		210		210	
System Vol (ml)		250		250	
H,avg: atm-m3/m3		0.0786	1.0E-25	0.1195	1.0E-25
H,avg:atm-mol/mol		106.8		164.9	
H,avg: atm-m3/mol		1.92E-03	1	2.97E-03	1
H,avg: kPa-m3/mol		0.1950		0.3011	
COV, r [std/mean]		8.18		21.95	
COV, both replic.		———		———	
Observation:	(1)	0.0861		0.1031	
[atm-m3/m3]	(2)	0.0759		0.0920	
	(3)	0.0812		0.1480	
	(4)	0.0712		0.1347	
Injection:	(1)	148920		188820	
[Peak Area]	(2)	145760		222290	
	(3)	649520		767310	
	(4)	679310		802970	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = -4.0E+03$$

$$\text{Y-INTERCEPT} = 7.4E+00$$

$$\text{R-SQUARED} = 0.8188$$

TEMPERATURE REGRESSION PLOT

Component 46
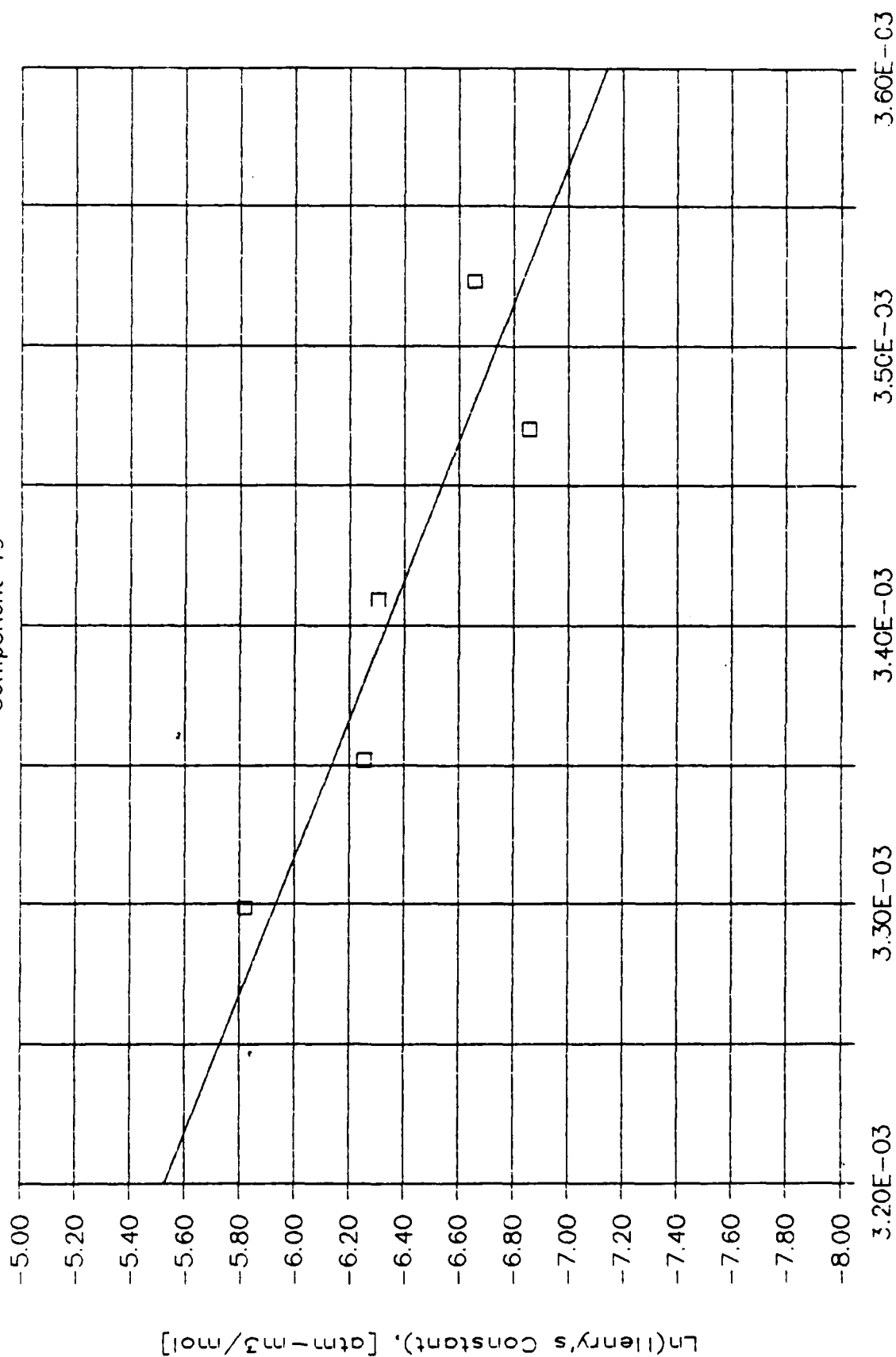
Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.8188

95% CONFIDENCE TEST

Component 46

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit
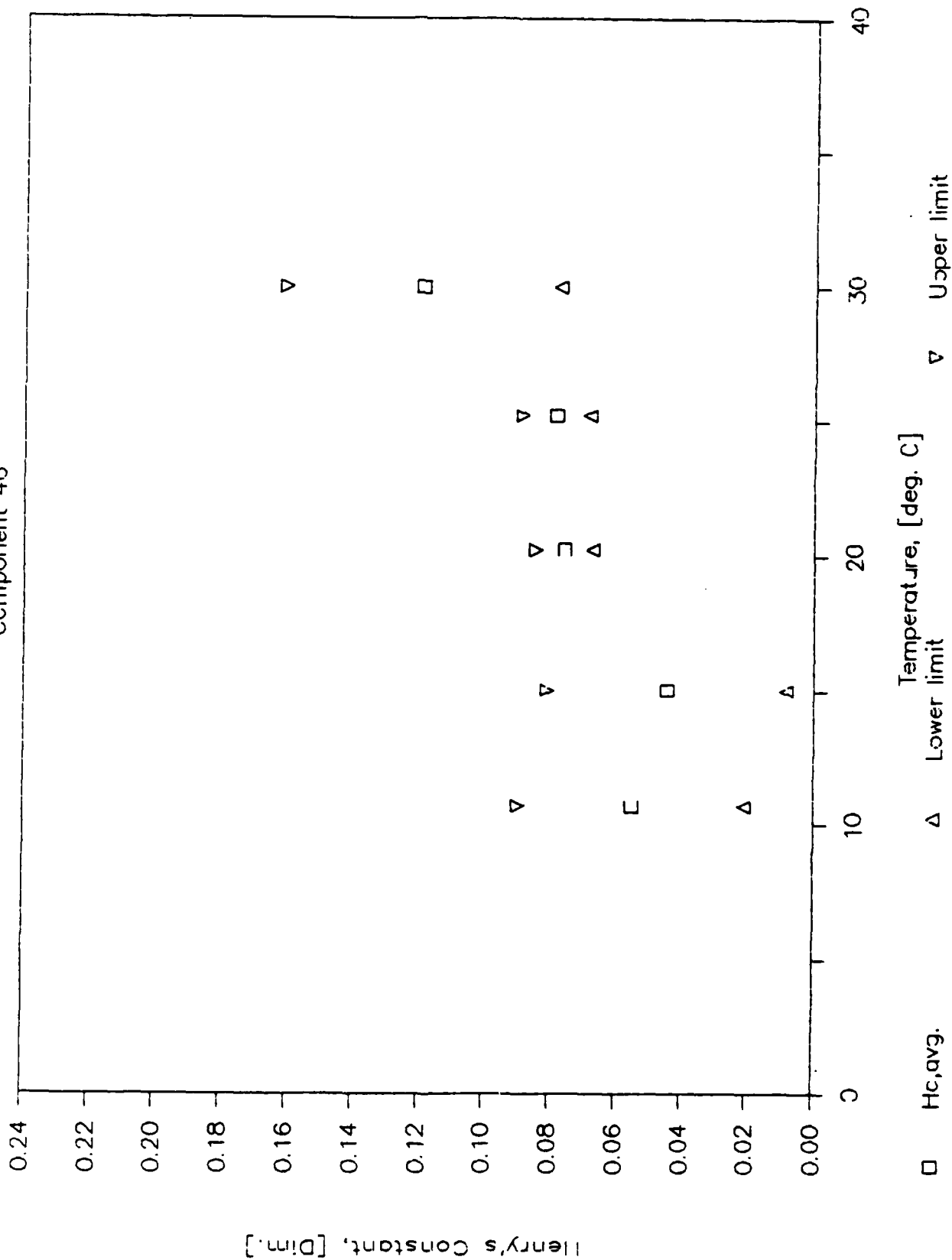
REGRESSION CONFIDENCE TEST

Component 46, 95% Confidence

Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Experimental data

—— Calc: r-sq. = 0.8188

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	30		45		25	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	18		18		18	
Component ID	47		47		47	
Temperature (C)	10.7		15		20.2	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.3560	1.0E-25	0.2850	1.0E-25	0.4212	1.0E-25
H, avg:atm-mol/mol	460.3		374.0		562.8	
H, avg: atm-m3/mol	8.29E-03	1	6.74E-03	1	1.01E-02	1
H, avg: kPa-m3/mol	0.8402		0.6827		1.0273	
COV, r [std/mean]	22.72		12.99		19.28	
COV, both replic.	———		———		———	
Observation: (1)	0.2649		0.3205		0.3638	
[atm-m3/m3] (2)	0.3711		0.2561		0.5058	
(3)	0.3300		0.3132		0.3407	
(4)	0.4581		0.2500		0.4746	
Injection: (1)	99857		84114		238920	
[Peak Area] (2)	116350		82765		227980	
(3)	261680		193110		501260	
(4)	206500		225530		394260	

		Temperature 4		Temperature 5	
RUN Number —)		46		31	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		18		18	
Component ID		47		47	
Temperature (C)		25.2		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.2015	1.0E-25	0.1508	1.0E-25
H, avg:atm-mol/mol		273.8		208.3	
H, avg: atm-m3/mol		4.93E-03	1	3.75E-03	1
H, avg: kPa-m3/mol		0.4999		0.3802	
COV, r [std/mean]		10.40		8.17	
COV, both replic.		———		———	
Observation:	(1)	0.2276		0.1641	
[atm-m3/m3]	(2)	0.1979		0.1433	
	(3)	0.2040		0.1581	
	(4)	0.1766		0.1378	
Injection:	(1)	150940		229280	
[Peak Area]	(2)	140560		224250	
	(3)	437990		818250	
	(4)	479570		886390	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = 3.3E+03$$

$$\text{Y-INTERCEPT} = -1.6E+01$$

$$\text{R-SQUARED} = 0.5552$$

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TEMPERATURE REGRESSION PLOT

Component 47

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.5552

Ln(Henry's Constant), [atm-m3/mol]

95% CONFIDENCE TEST

Component 47

Temperature, [deg. C]

Henry's Constant, [Dim.]

△ Lower limit   ▽ Upper limit   △ Hc,avg.   □

REGRESSION CONFIDENCE TEST
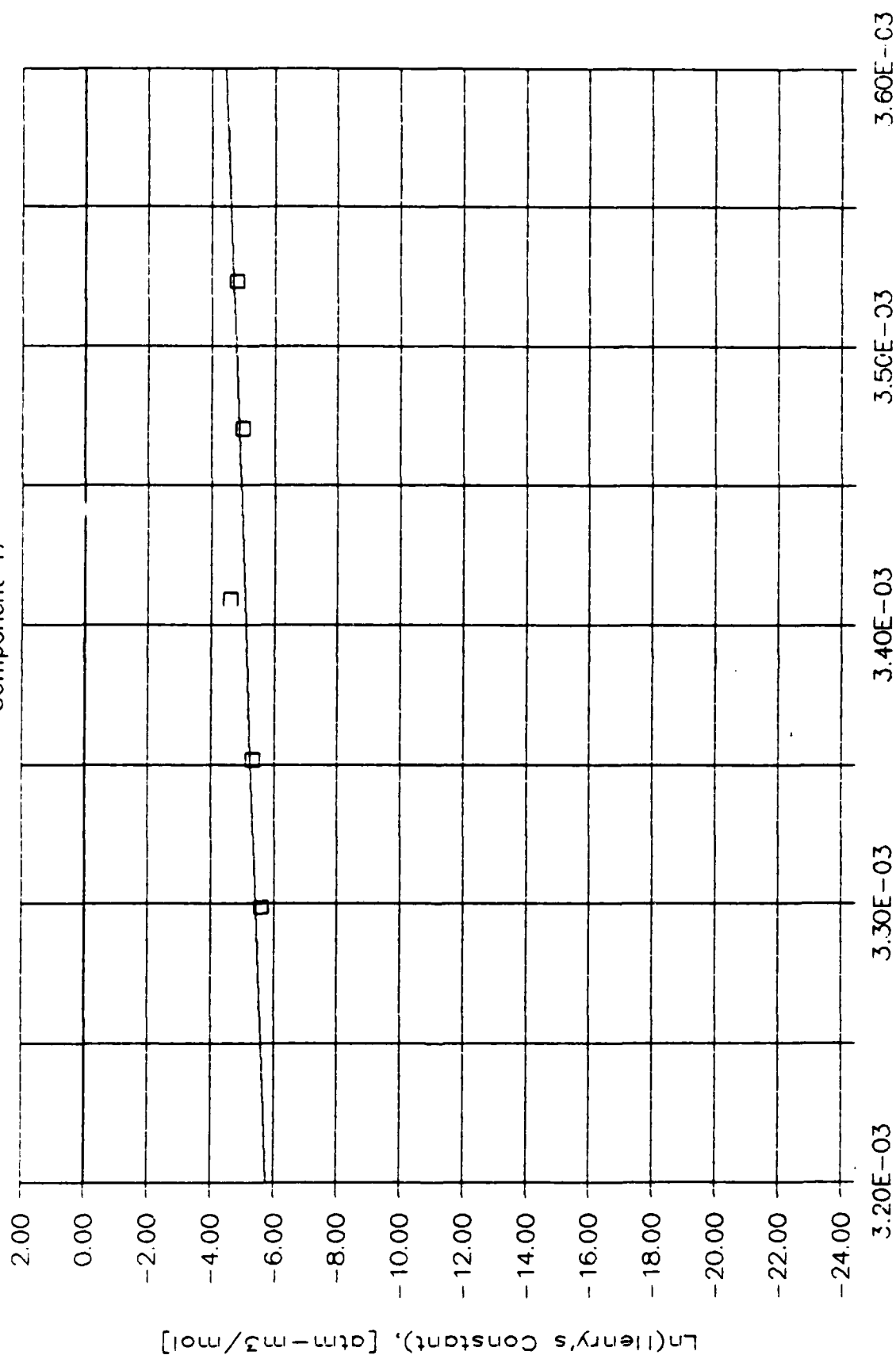
Component 47, 95% Confidence
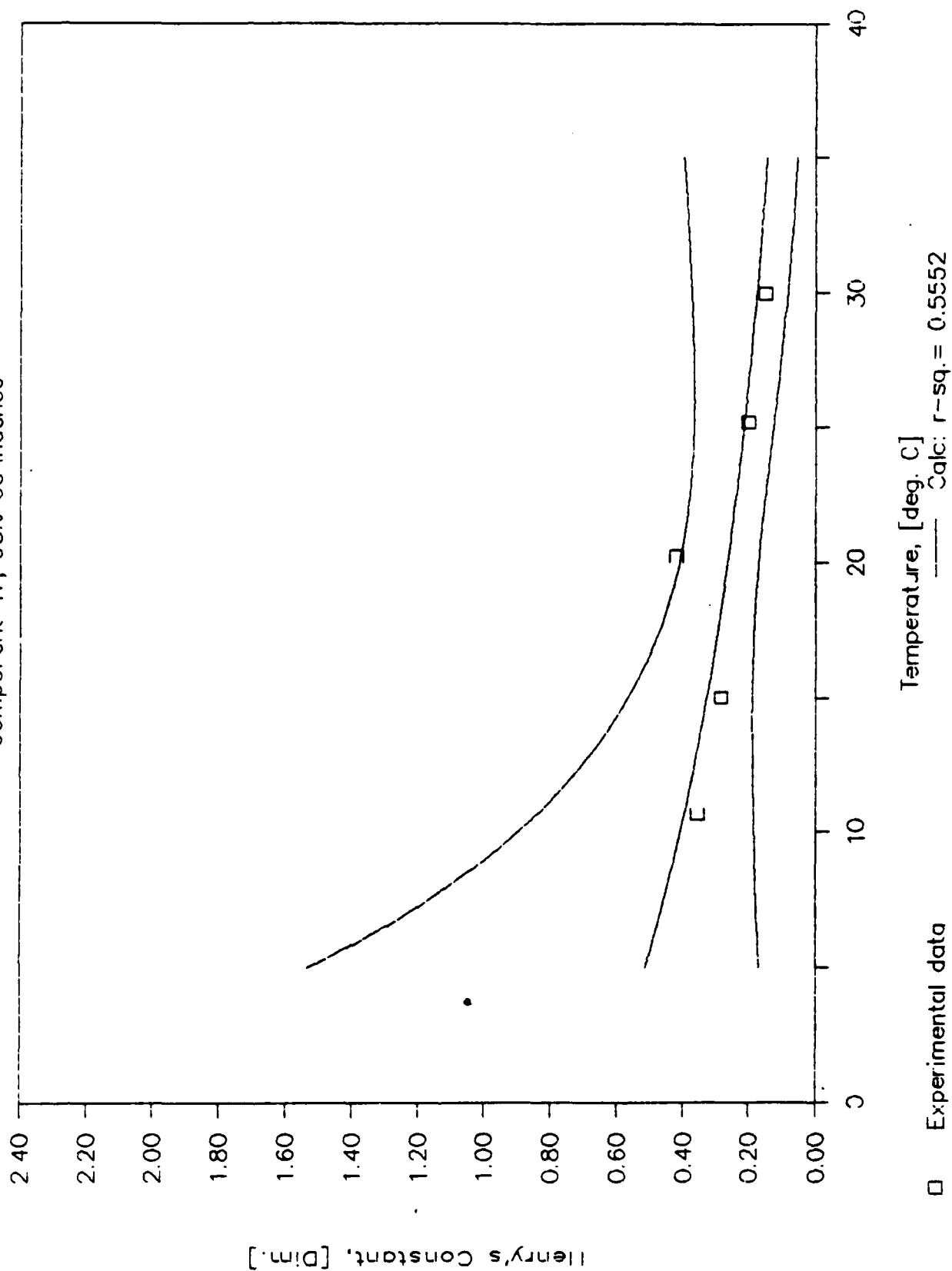
Temperature, [deg. C]

Calc: r-sq. = 0.5552

Experimental data

Henry's Constant, [Dim.]

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	37		50		62	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	19		19		19	
Component ID	49		49		49	
Temperature (C)	10.2		15		19.9	
Low Vol (ml)	22		22		22	
High Vol (ml)	202		202		202	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	0.0995	1.0E-25	0.1228	1.0E-25	0.1553	1.0E-25
H, avg:atm-mol/mol	128.5		161.2		207.3	
H, avg: atm-m3/mol	2.31E-03	1	2.90E-03	1	3.73E-03	1
H, avg: kPa-m3/mol	0.2345		0.2942		0.3784	
COV, r [std/mean]	2.35		10.37		2.65	
COV, both replic.	-----		-----		-----	
Observation: (1)	0.1018		0.1290		0.1519	
[atm-m3/m3] (2)	0.1013		0.1372		0.1515	
(3)	0.0978		0.1088		0.1590	
(4)	0.0973		0.1162		0.1586	
Injection: (1)	194170		238570		262000	
[Peak Area] (2)	190410		218180		269060	
(3)	888350		966080		968120	
(4)	890840		933970		969610	

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		Temperature 4			Temperature 5		
RUN Number —)		51			38		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2	
Group No.		19			19		
Component ID		49			49		
Temperature (C)		25			30		
Low Vol (ml)		22			22		
High Vol (ml)		202			202		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		0.1977	1.0E-25		0.2367	1.0E-25	
H, avg: atm-mol/mol		268.5			326.8		
H, avg: atm-m3/mol		4.84E-03	1		5.89E-03	1	
H, avg: kPa-m3/mol		0.4901			0.5966		
COV, r [std/mean]		3.63			2.04		
COV, both replic.		——			——		
Observation: (1)		0.2023			0.2385		
[atm-m3/m3] (2)		0.1903			0.2311		
(3)		0.2052			0.2423		
(4)		0.1930			0.2349		
Injection: (1)		360240			456690		
[Peak Area] (2)		363500			461530		
(3)		1119500			1276300		
(4)		1163300			1302900		

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

OF POINTS   =   5

SLOPE   =   -4.1E+03

Y-INTERCEPT   =   8.5E+00

R-SQUARED   =   0.9988

TEMPERATURE REGRESSION PLOT

Component 49

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
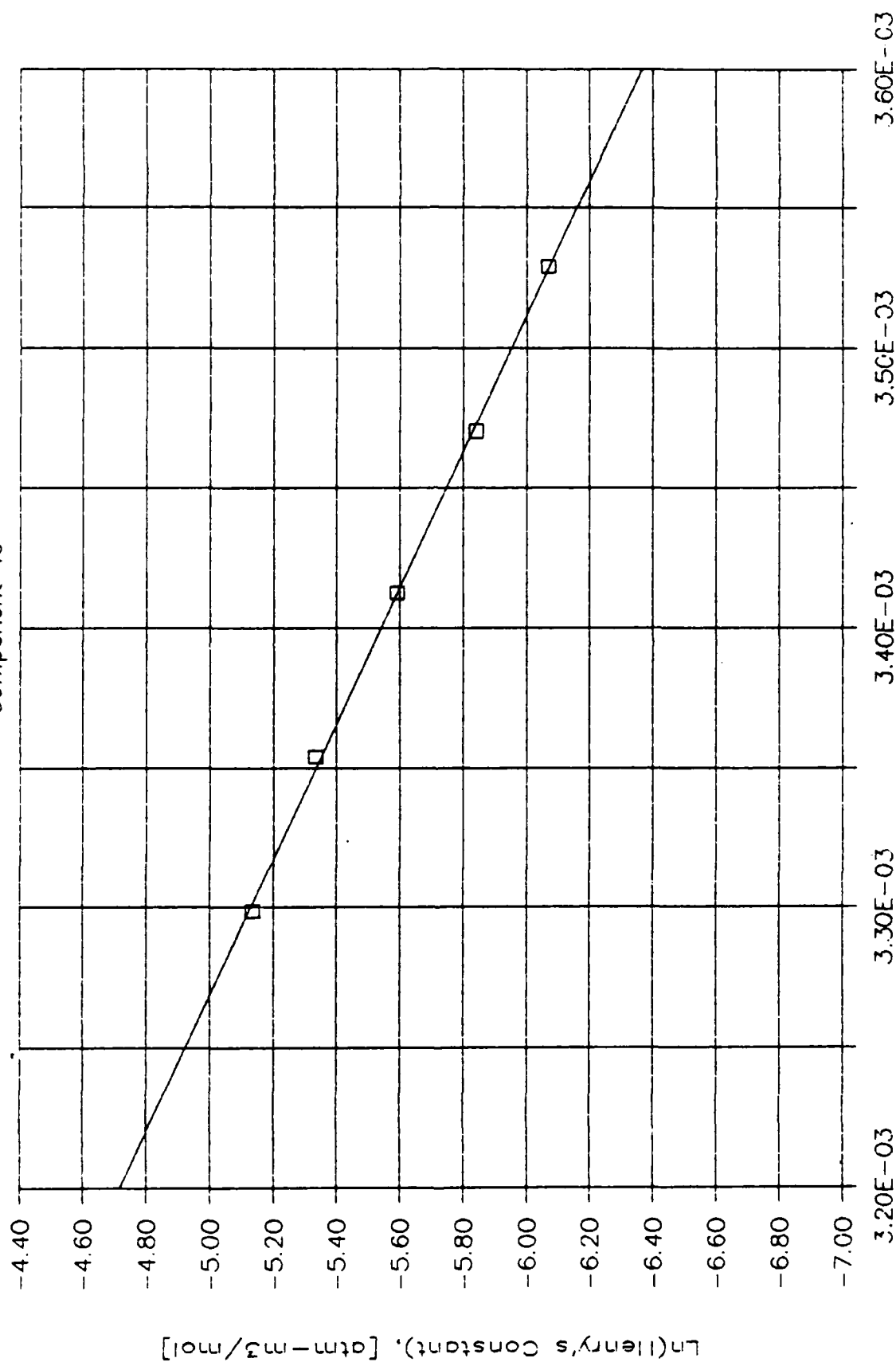
□ Experimental data
—— Regr: r-sq.= 0.9988

95% CONFIDENCE TEST

Component 49

Henry's Constant, [Dim.]

Temperature, [deg. C]

△ Lower limit
▽ Upper limit
□ Hc,avg.
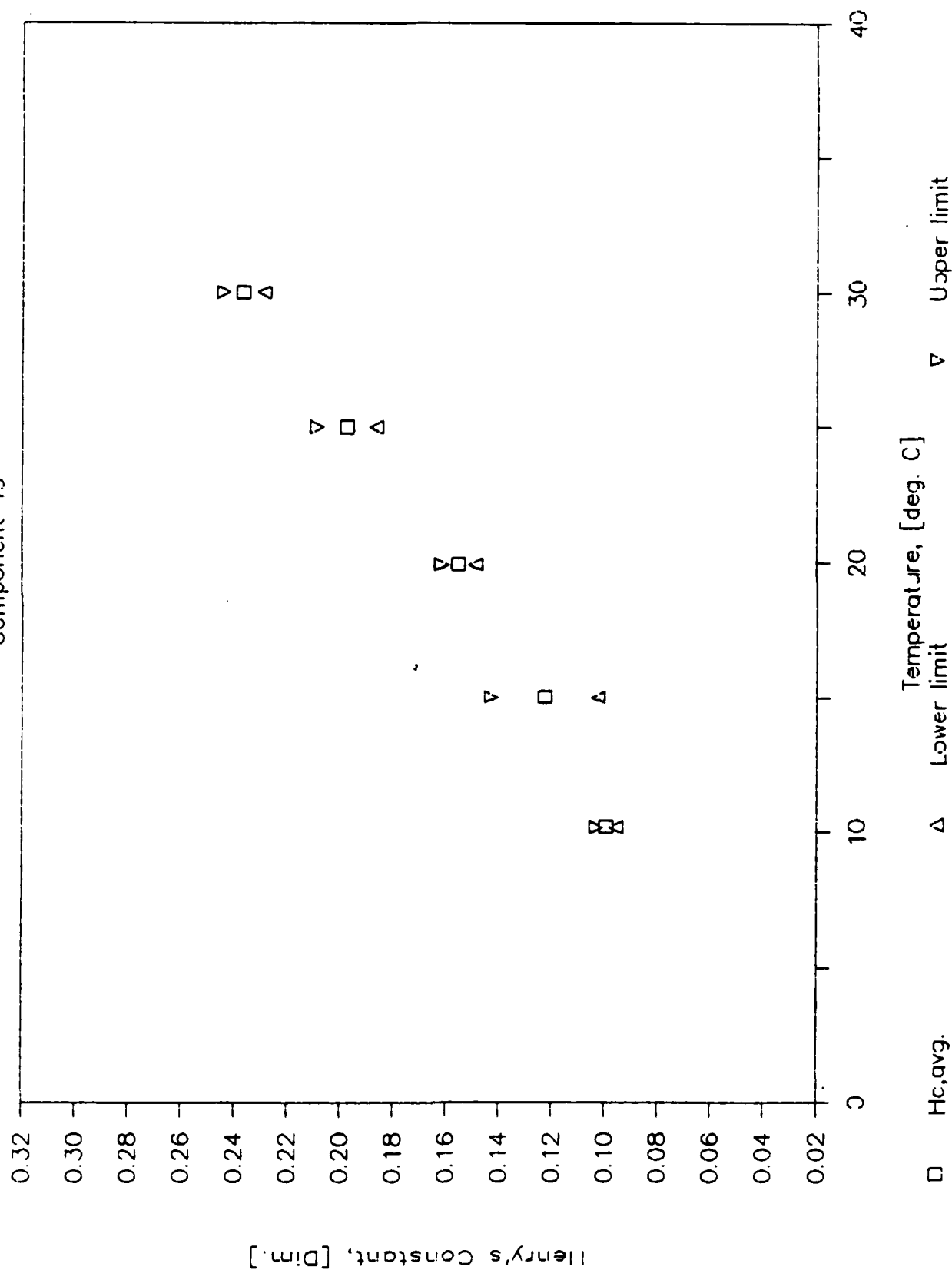
REGRESSION CONFIDENCE TEST

Component 49, 95% Confidence
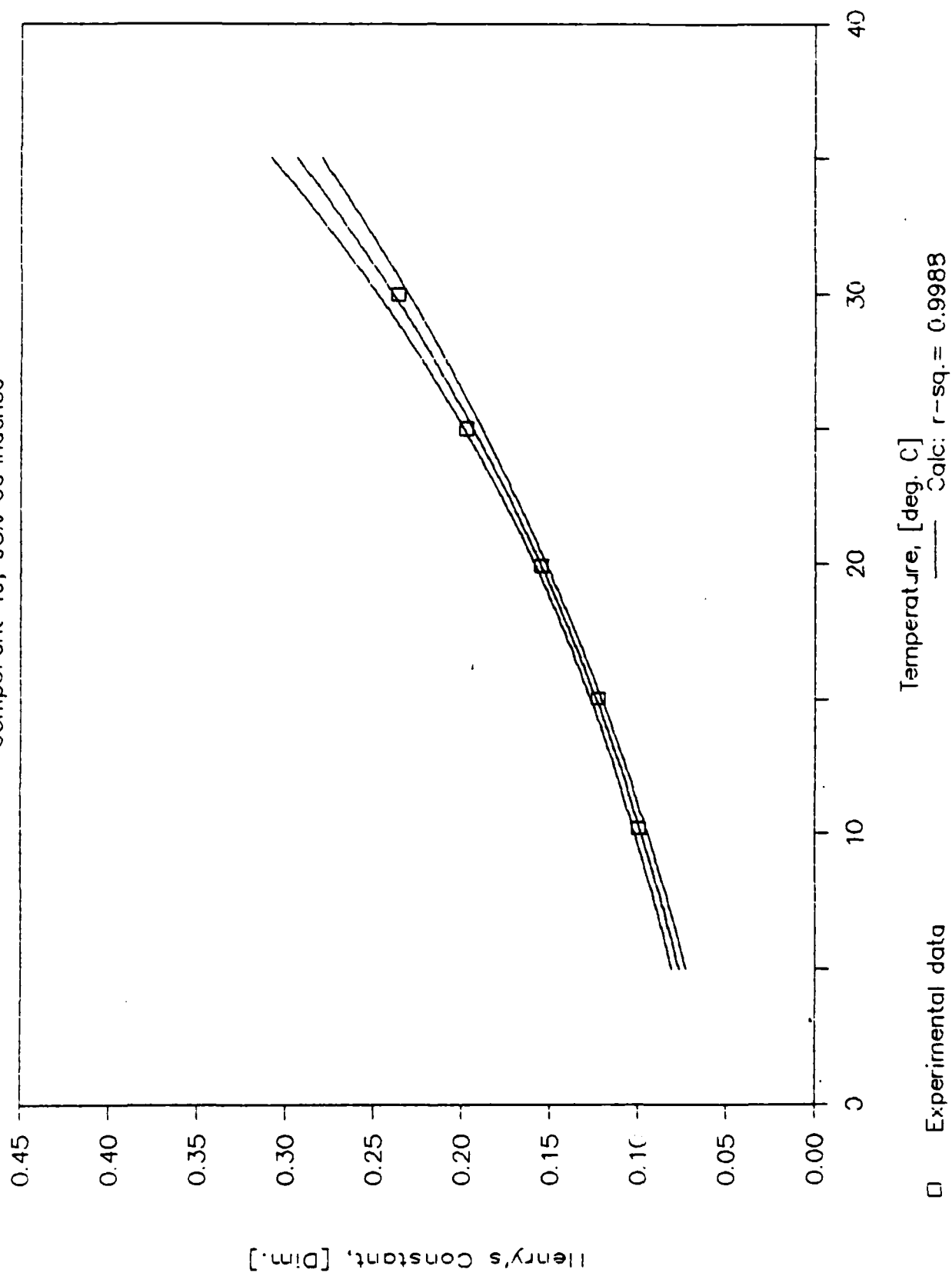
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq.= 0.9988

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)		41		54		66	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		19		19		19	
Component ID		50		50		50	
Temperature (C)		10.2		15		19.9	
Low Vol (ml)		22		22		22	
High Vol (ml)		202		202		202	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0655	1.0E-25	0.0801	1.0E-25	0.0928	1.0E-25
H, avg: atm-mol/mol		84.5		105.1		123.9	
H, avg: atm-m3/mol		1.52E-03	1	1.89E-03	1	2.23E-03	1
H, avg: kPa-m3/mol		0.1543		0.1919		0.2262	
COV, r [std/mean]		9.04		0.98		4.28	
COV, both replic.		----		----		----	
Observation:	(1)	0.0728		0.0792		0.0884	
[atm-m3/m3]	(2)	0.0654		0.0805		0.0947	
	(3)	0.0654		0.0797		0.0909	
	(4)	0.0583		0.0810		0.0973	
Injection:	(1)	533510		736390		886230	
[Peak Area]	(2)	511030		738240		898130	
	(3)	2840100		3783000		4336900	
	(4)	2965000		3756800		4200100	

	Temperature 4		Temperature 5	
RUN Number ---)	55		42	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2
Group No.	19		19	
Component ID	50		50	
Temperature (C)	25		30	
Low Vol (ml)	22		22	
High Vol (ml)	202		202	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	0.1538	1.0E-25	0.1400	1.0E-25
H, avg: atm-mol/mol	208.9		193.4	
H, avg: atm-m3/mol	3.76E-03	1	3.48E-03	1
H, avg: kPa-m3/mol	0.3813		0.3530	
COV, r [std/mean]	3.32		2.37	
COV, both replic.	------		------	
Observation: (1)	0.1530		0.1440	
[atm-m3/m3] (2)	0.1476		0.1392	
(3)	0.1600		0.1409	
(4)	0.1545		0.1361	
Injection: (1)	1251600		1163700	
[Peak Area] (2)	1284900		1149400	
(3)	4606400		4433100	
(4)	4701400		4519900	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$\#$ OF POINTS = 5

SLOPE = -4.1E+03

Y-INTERCEPT = 7.9E+00

R-SQUARED = 0.9050

TEMPERATURE REGRESSION PLOT

Component 50

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
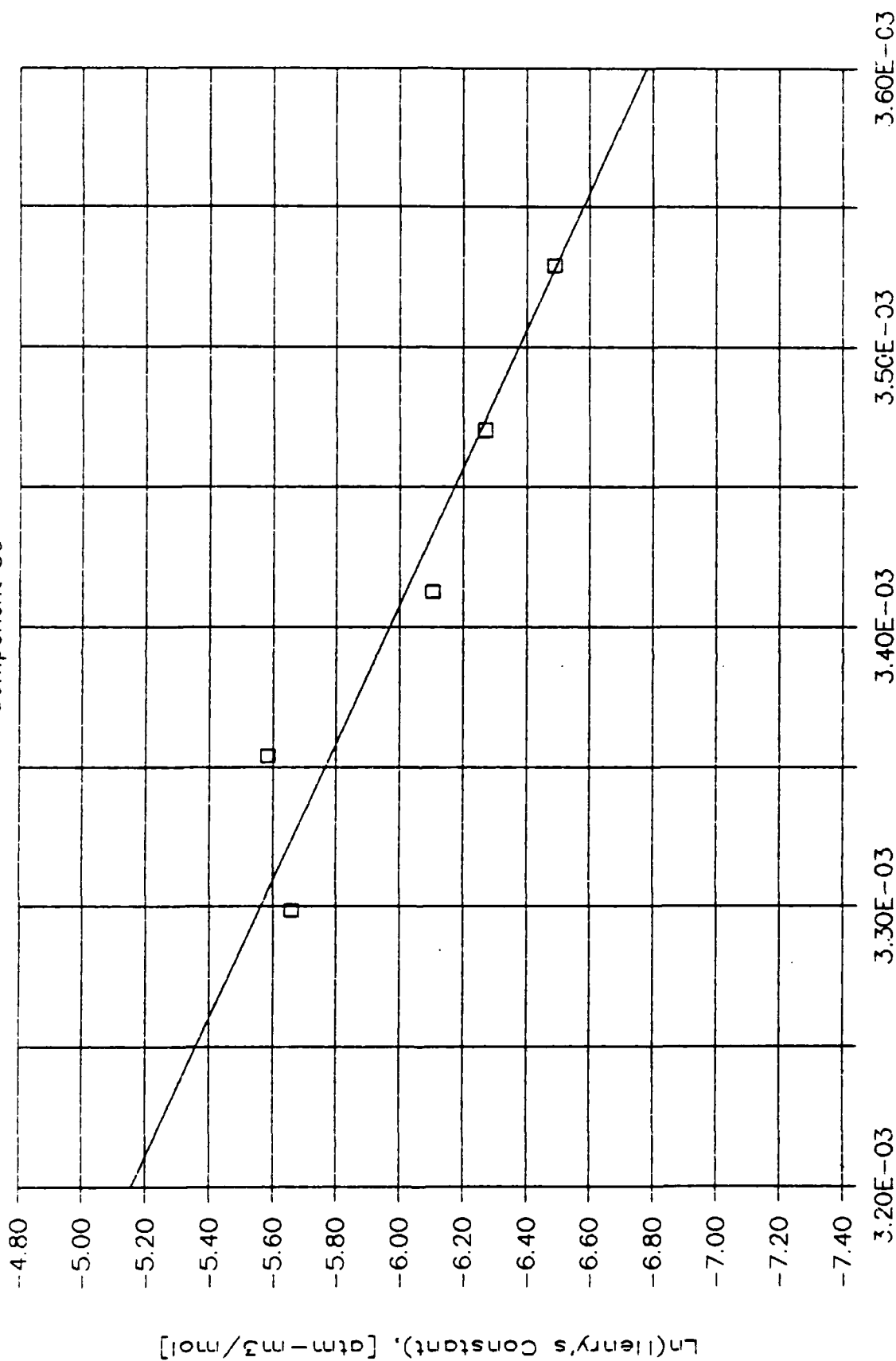
□ Experimental data

—— Regr: r-sq.= 0.905

95% CONFIDENCE TEST

Component 50

Henry's Constant, [Dim.]

Temperature, [deg. C]

Lower limit   Upper limit

Hc,avg.
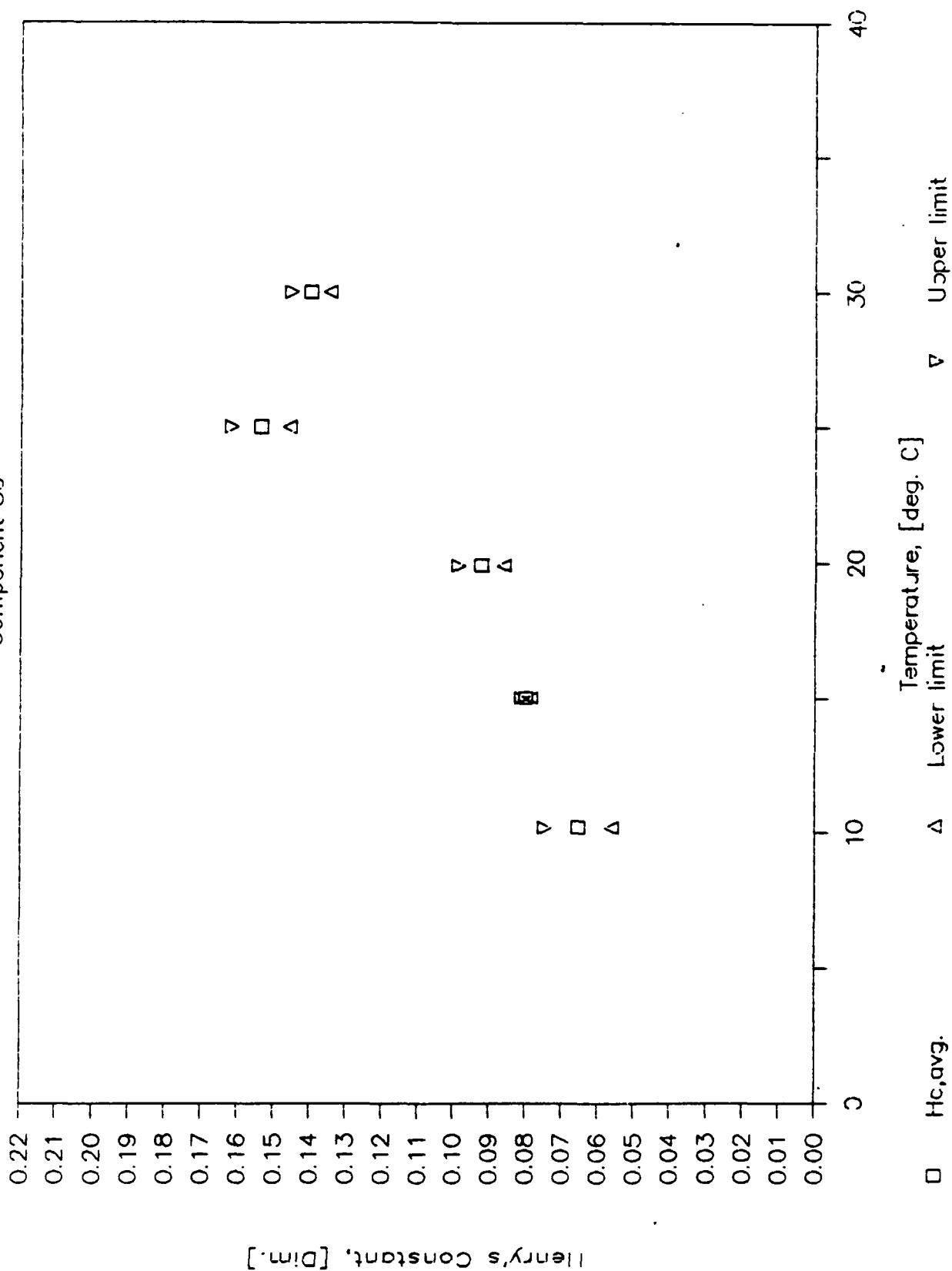
REGRESSION CONFIDENCE TEST

Component 50, 95% Confidence
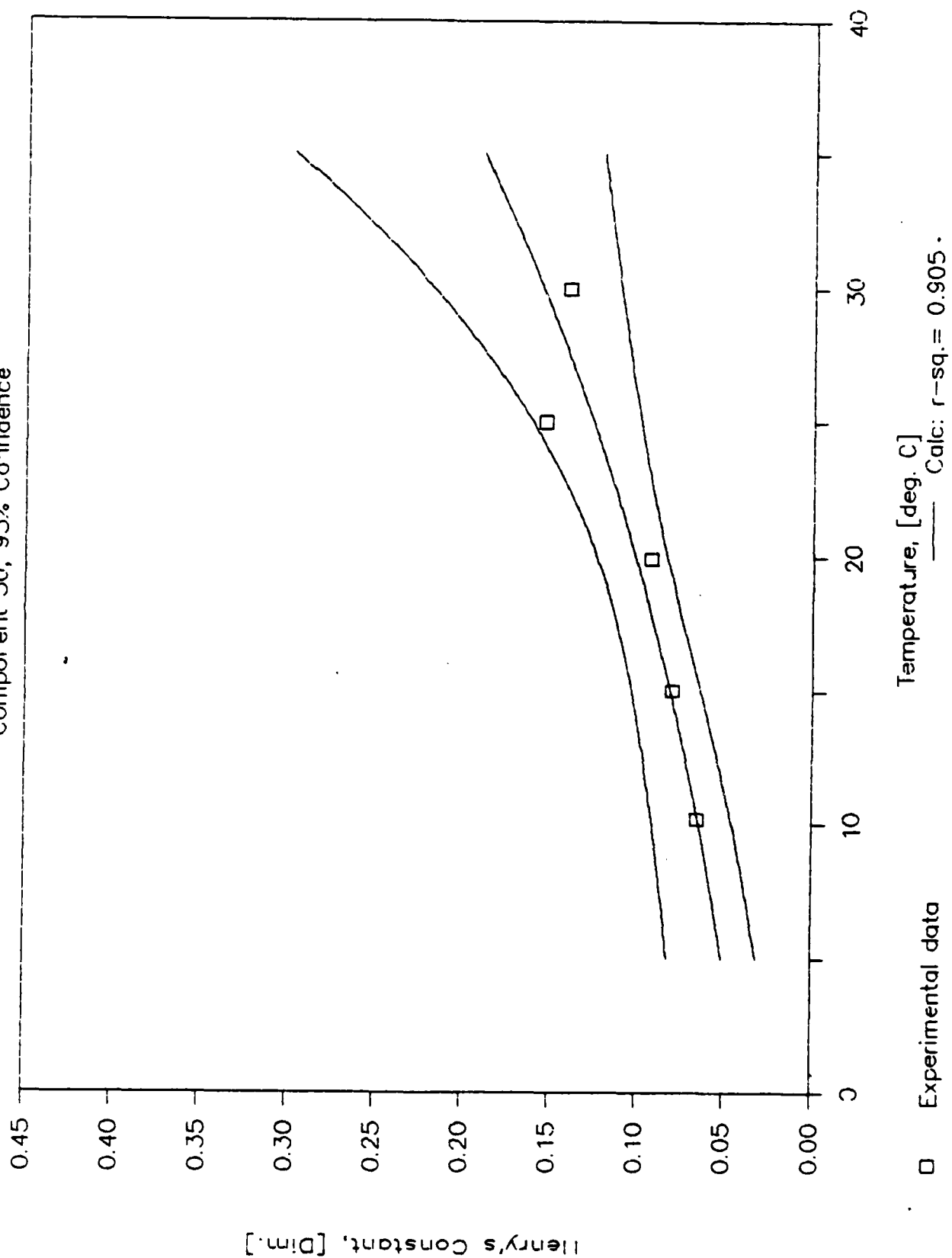
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

——— Calc: r-sq.= 0.905.

		Temperature 1		Temperature 2		Temperature 3	
RUN Number —)		46		58		71	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		19		19		19	
Component ID		51		51		51	
Temperature (C)		10.2		15		19.9	
Low Vol (ml)		22		22		22	
High Vol (ml)		202		202		202	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		6.6092	1.0E-25	9.1000	1.0E-25	10.1702	1.0E-25
H, avg:atm-mol/mol		8529.9		11943.5		13575.1	
H, avg: atm-m3/mol		1.54E-01	1	2.15E-01	1	2.45E-01	1
H, avg: kPa-m3/mol		15.5712		21.8026		24.7809	
COV, r [std/mean]		5.63		8.21		7.40	
COV, both replic.		———		———		———	
Observation: (1)		6.2345		8.5849		9.7805	
[atm-m3/m3] (2)		6.3524		9.8822		9.3493	
(3)		6.8564		8.3488		11.0394	
(4)		6.9936		9.5841		10.5115	
Injection: (1)		3602800		3672000		2731900	
[Peak Area] (2)		3734300		3639300		2825800	
(3)		1251100		1139200		814570	
(4)		1242100		1091600		825500	

	Temperature 4		Temperature 5	
RUN Number ---)	59		47	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2
Group No.	19		19	
Component ID	51		51	
Temperature (C)	25		30	
Low Vol (ml)	22		22	
High Vol (ml)	202		202	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	13.0355	1.0E-25	12.9085	1.0E-25
H, avg: atm-mol/mol	17702.5		17824.0	
H, avg: atm-m3/mol	3.19E-01	1	3.21E-01	1
H, avg: kPa-m3/mol	32.3154		32.5372	
COV, r [std/mean]	5.60		3.00	
COV, both replic.	------		------	
Observation: (1)	12.2717		12.5670	
[atm-m3/m3] (2)	12.5795		12.5789	
(3)	13.4640		13.2374	
(4)	13.8266		13.2505	
Injection: (1)	4235400		4664300	
[Peak Area] (2)	4330400		4722500	
(3)	1188100		1300800	
(4)	1180900		1300500	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

# OF POINTS	=	5
SLOPE	=	-3.2E+03
Y-INTERCEPT	=	9.6E+00
R-SQUARED	=	0.9318

TEMPERATURE REGRESSION PLOT

Component 51

Ln(Henry's Constant), [atm—m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data
——— Regr: r-sq.= 0.9318

95% CONFIDENCE TEST

Component 51

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit

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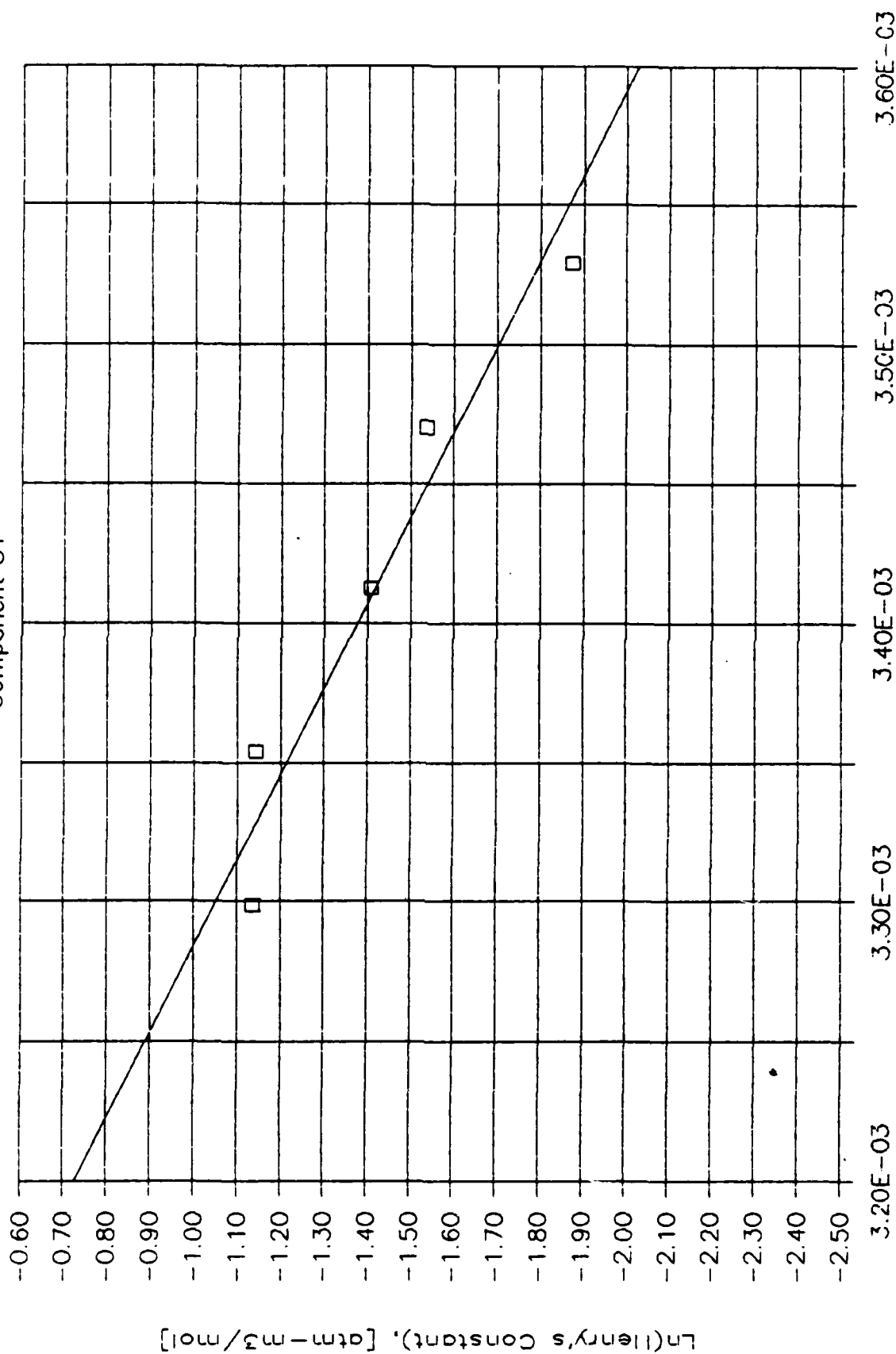
REGRESSION CONFIDENCE TEST

Component 51, 95% Confidence
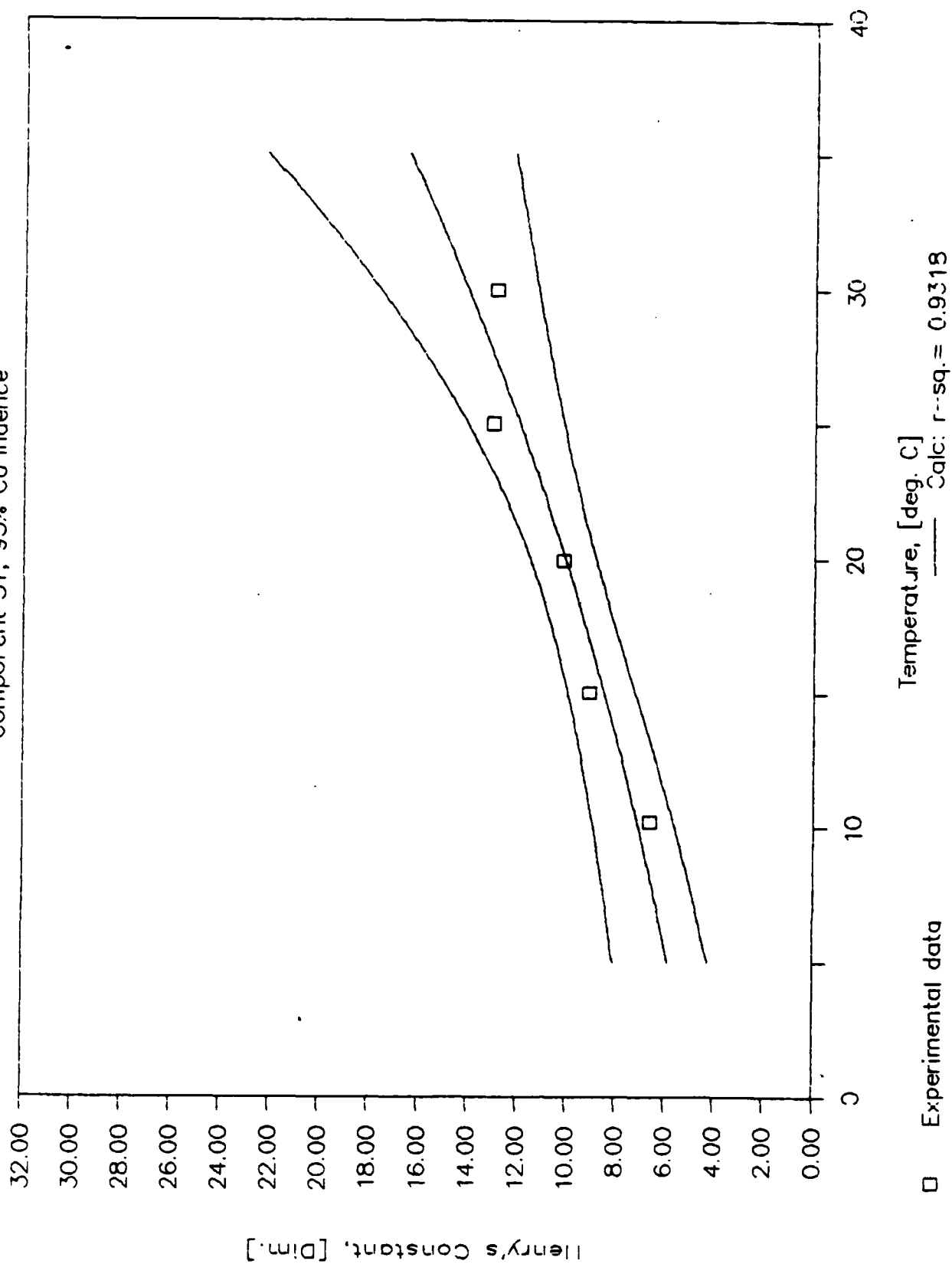
Temperature, [deg. C]

Henry's Constant, [Dim.]

Calc: r-sq. = 0.9318

□ Experimental data

		Temperature 1		Temperature 2		Temperature 3	
RUN Number —)		1		13		25	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		20		20		20	
Component ID		52		52		52	
Temperature (C)		10.1		15.1		19.6	
Low Vol (ml)		21		21		21	
High Vol (ml)		201		201		201	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0067	1.0E-25	0.0096	1.0E-25	0.0103	1.0E-25
H, avg: atm-mol/mol		8.7		12.6		13.7	
H, avg: atm-m3/mol		1.56E-04	1	2.27E-04	1	2.47E-04	1
H, avg: kPa-m3/mol		0.0158		0.0230		0.0250	
COV, r [std/mean]		119.86		41.57		27.74	
COV, both replic.		———		———		———	
Observation:	(1)	-0.0001		0.0140		0.0113	
[atm-m3/m3]	(2)	-0.0004		0.0073		0.0070	
	(3)	0.0138		0.0118		0.0136	
	(4)	0.0136		0.0053		0.0092	
Injection:	(1)	27861		41436		53756	
[Peak Area]	(2)	32000		40597		54941	
	(3)	267080		345340		459360	
	(4)	267710		367900		479000	

		Temperature 4		Temperature 5	
RUN Number —)		14		2	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		20		20	
Component ID		52		52	
Temperature (C)		25		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0100	1.0E-25	0.0118	1.0E-25
H, avg: atm-mol/mol		13.6		16.3	
H, avg: atm-m3/mol		2.45E-04	1	2.93E-04	1
H, avg: kPa-m3/mol		0.0248		0.0297	
COV, r [std/mean]		1.12		32.58	
COV, both replic.		——		——	
Observation:	(1)	0.0101		0.0126	
[atm-m3/m3]	(2)	0.0099		0.0165	
	(3)	0.0101		0.0072	
	(4)	0.0099		0.0109	
Injection:	(1)	75644		107330	
[Peak Area]	(2)	75648		101930	
	(3)	653760		906060	
	(4)	654980		874460	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\# \text{ OF POINTS} = 5$$

$$\text{SLOPE} = -2.3E+03$$

$$\text{Y-INTERCEPT} = -4.8E-01$$

$$\text{R-SQUARED} = 0.8229$$

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TEMPERATURE REGRESSION PLOT

Component 52

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
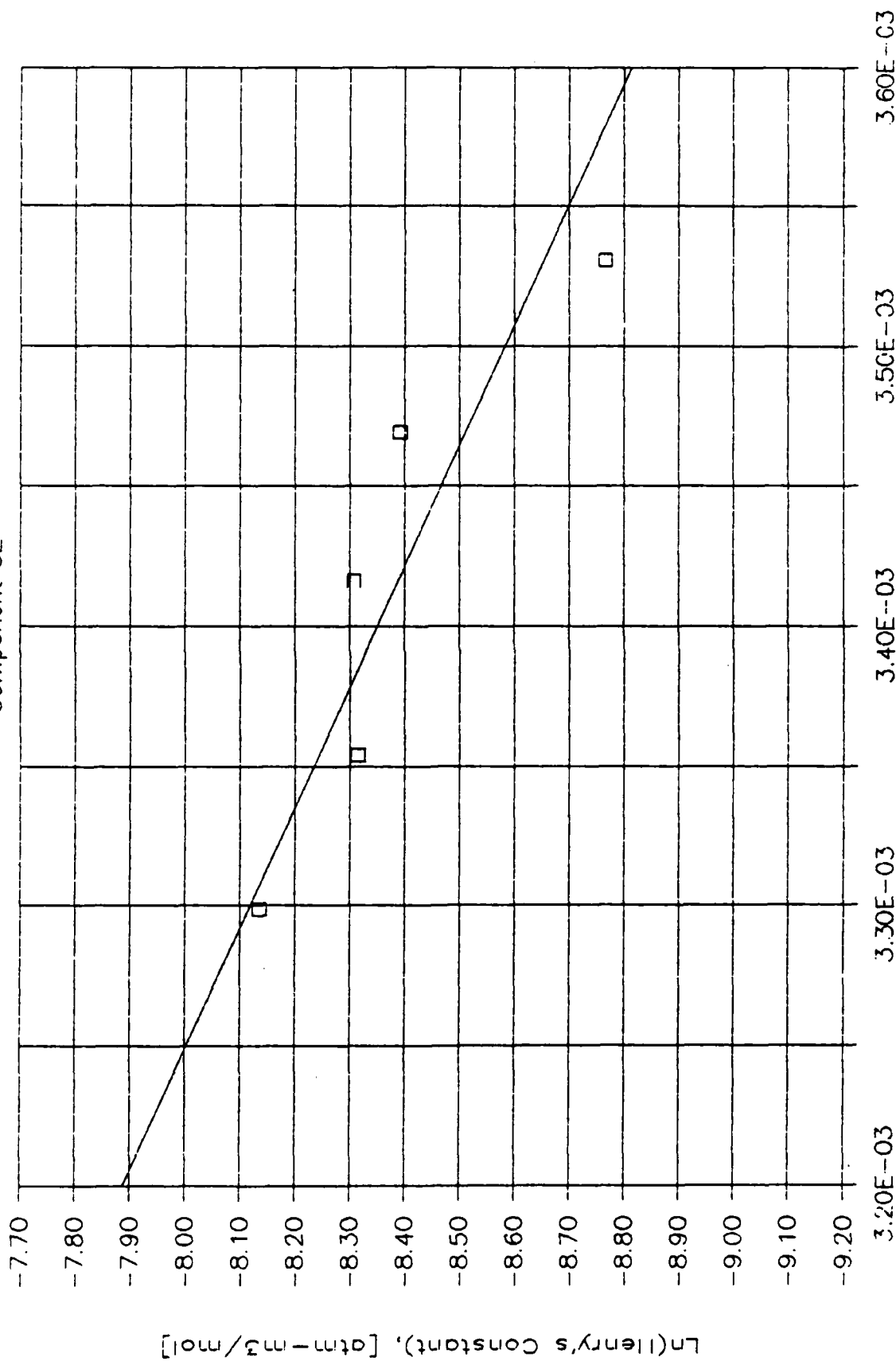
□ Experimental data

—— Regr: r-sq.= 0.8229

95% CONFIDENCE TEST

Component 52

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Hc,avg.   △ Lower limit   ▽ Upper limit
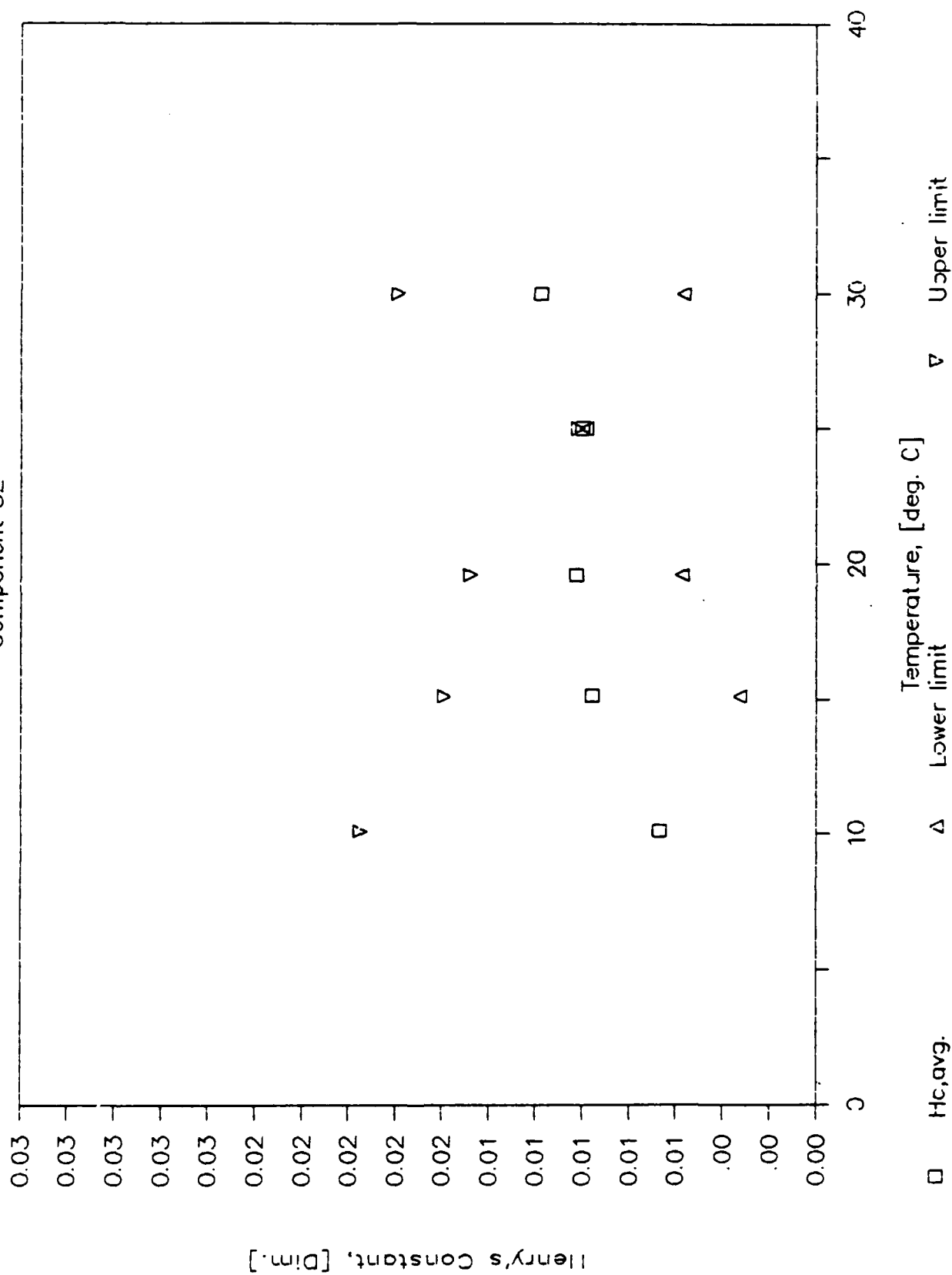
REGRESSION CONFIDENCE TEST

Component 52, 95% Confidence
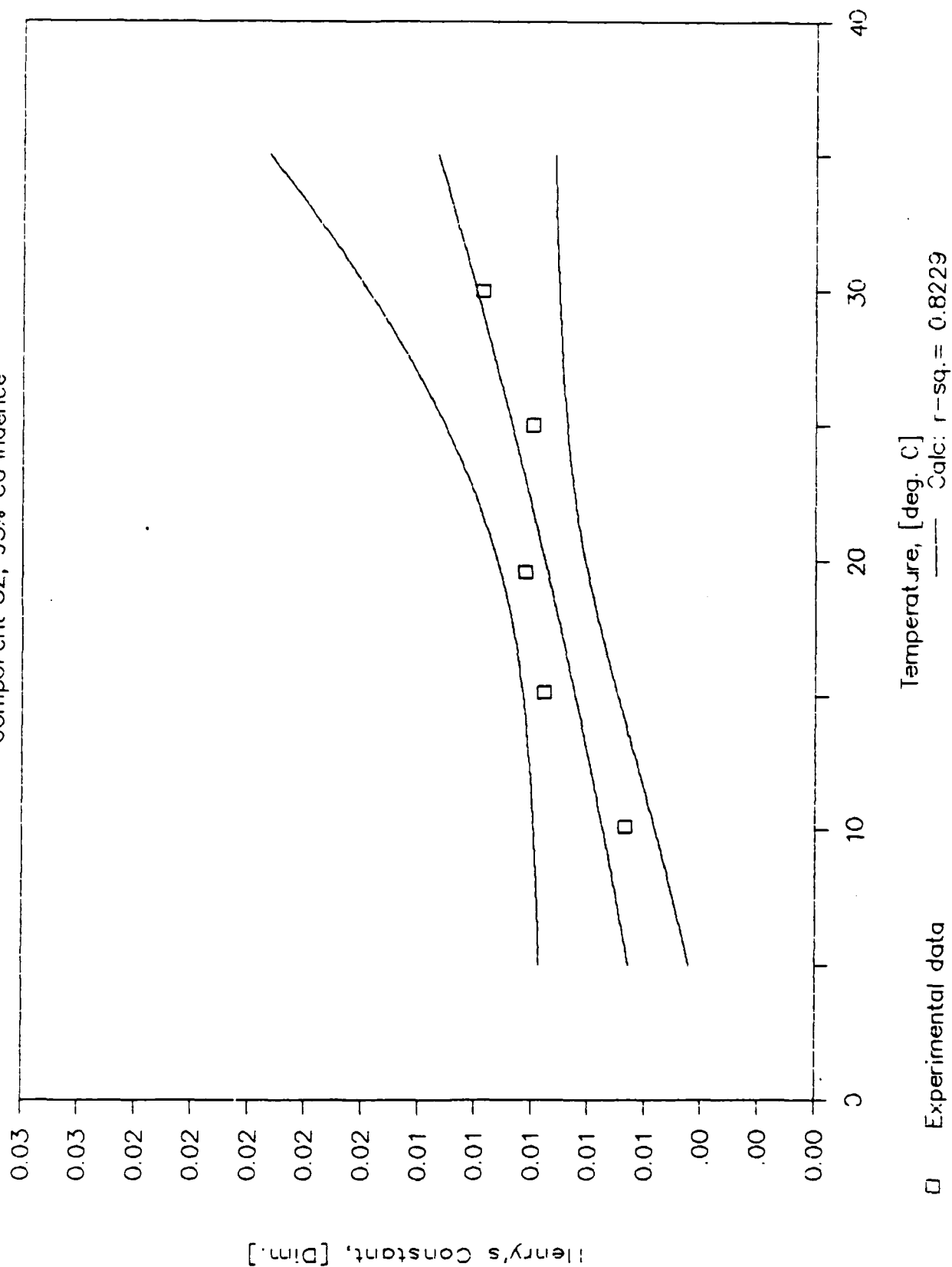
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

—— Calc: r-sq. = 0.8229

	Temperature 1		Temperature 2		Temperature 3	
RUN Number —)	2		17		52	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	20		20		20	
Component ID	152		152		152	
Temperature (C)	10.5		15.1		20.2	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H,avg: atm-m3/m3	0.0120	1.0E-25	0.0166	1.0E-25	0.0077	1.0E-25
H,avg:atm-mol/mol	15.5		21.8		10.3	
H,avg: atm-m3/mol	2.79E-04	1	3.92E-04	1	1.86E-04	1
H,avg: kPa-m3/mol	0.0282		0.0397		0.0188	
COV, r [std/mean]	35.50		21.40		6.32	
COV, both replic.	——		——		——	
Observation: (1)	0.0161		0.0143		0.0080	
[atm-m3/m3] (2)	0.0151		0.0129		0.0072	
(3)	0.0088		0.0203		0.0082	
(4)	0.0078		0.0188		0.0074	
Injection: (1)	33042		43700		49633	
[Peak Area] (2)	30852		46110		49719	
(3)	269990		363080		437630	
(4)	272570		367890		441190	

		Temperature 4		Temperature 5	
RUN Number ---)		17		3	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2
Group No.		20		20	
Component ID		152		152	
Temperature (C)		25.2		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0053	1.0E-25	0.0044	1.0E-25
H, avg: atm-mol/mol		7.2		6.1	
H, avg: atm-m3/mol		1.30E-04	1	1.10E-04	1
H, avg: kPa-m3/mol		0.0131		0.0112	
COV, r [std/mean]		81.79		19.78	
COV, both replic.		------		------	
Observation: (1)		0.0098		0.0055	
[atm-m3/m3] (2)		0.0082		0.0047	
(3)		0.0024		0.0041	
(4)		0.0009		0.0034	
Injection: (1)		78786		100440	
[Peak Area] (2)		73177		99088	
(3)		683190		908580	
(4)		693890		915260	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\# \text{ OF POINTS} = 5$$

$$\text{SLOPE} = 5.2E+03$$

$$\text{Y-INTERCEPT} = -2.6E+01$$

$$\text{R-SQUARED} = 0.7973$$

TEMPERATURE REGRESSION PLOT

Component 152

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.7973
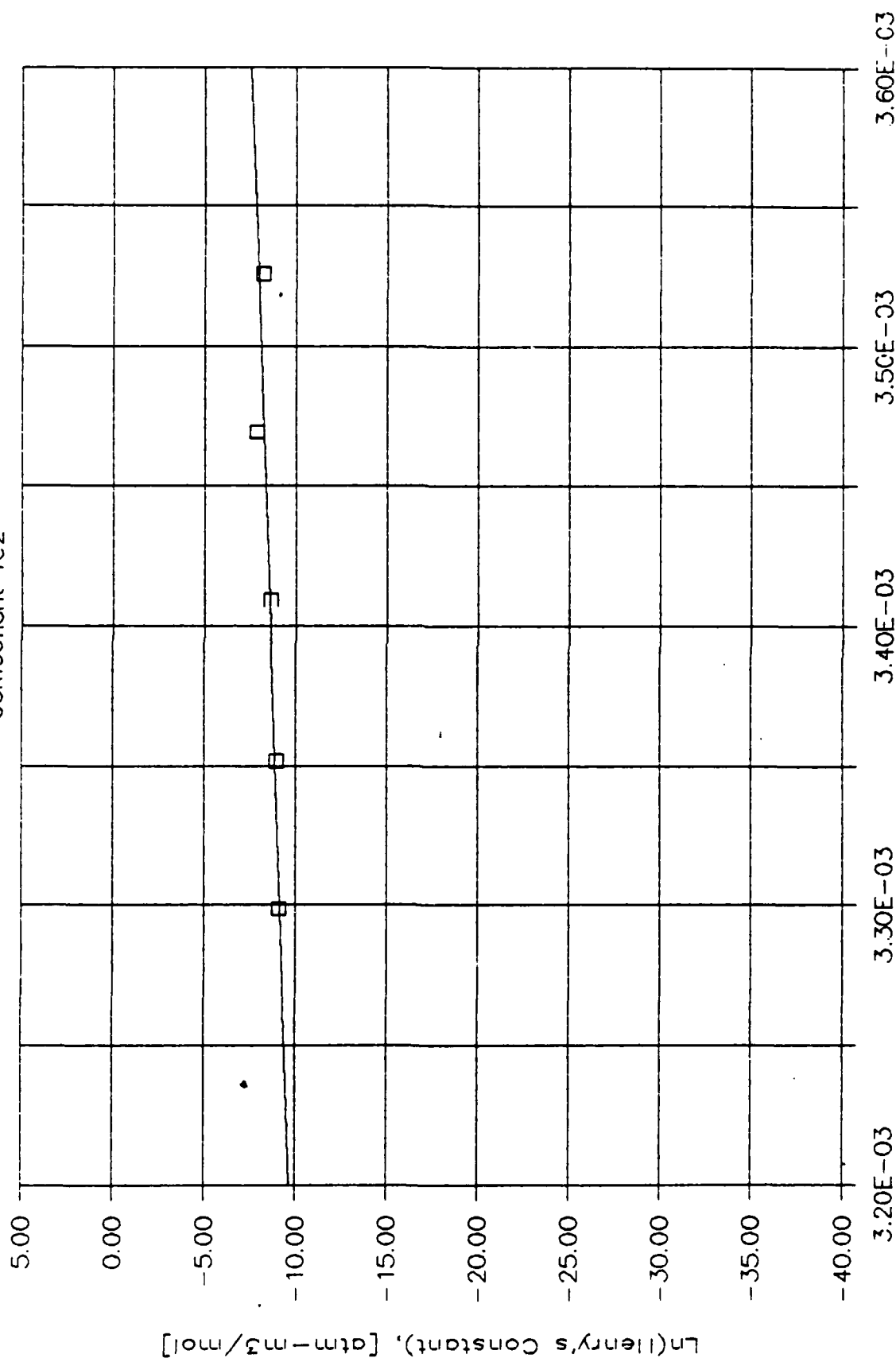
95% CONFIDENCE TEST
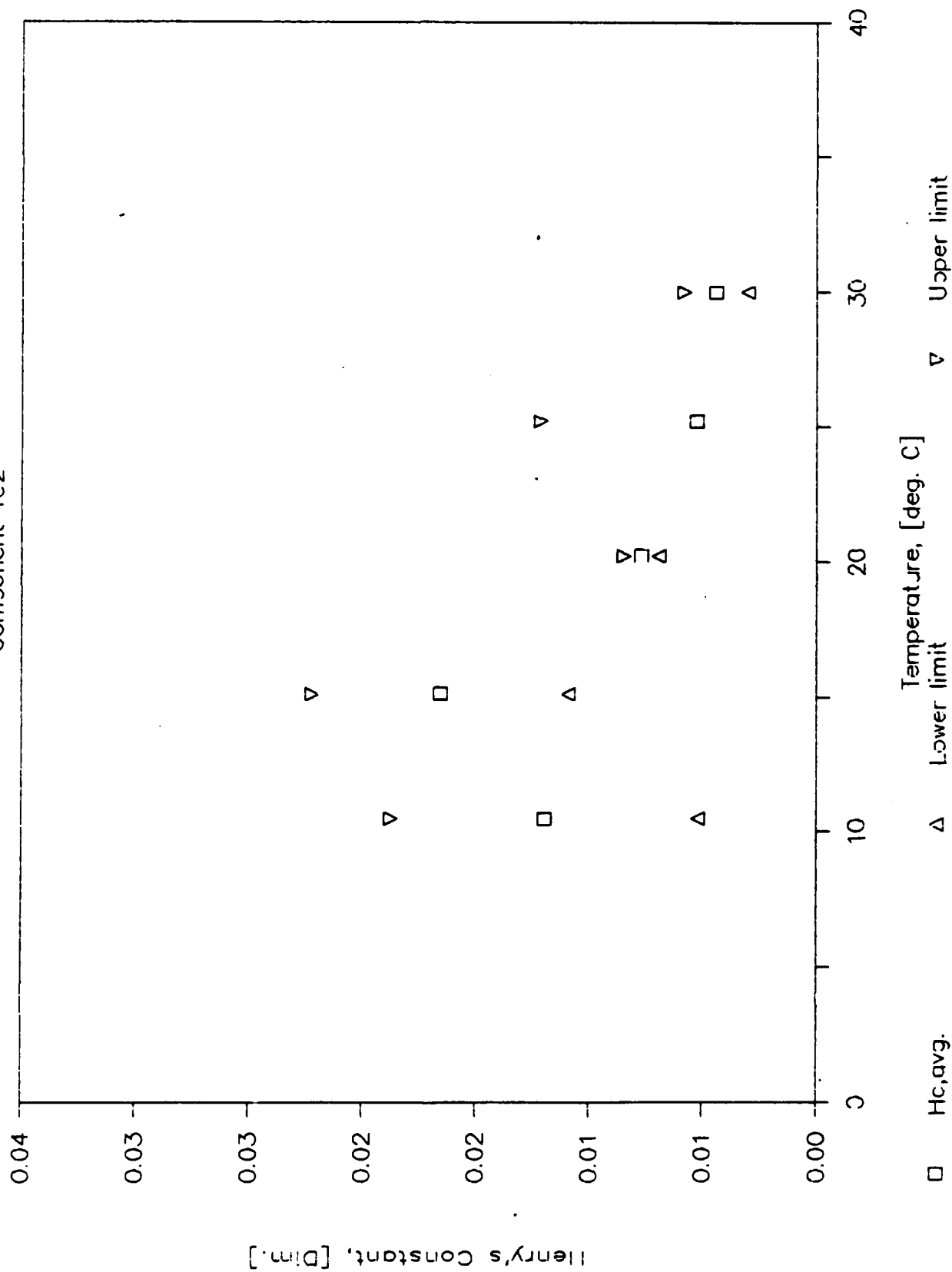
Component 152

REGRESSION CONFIDENCE TEST

Component 152, 95% Confidence
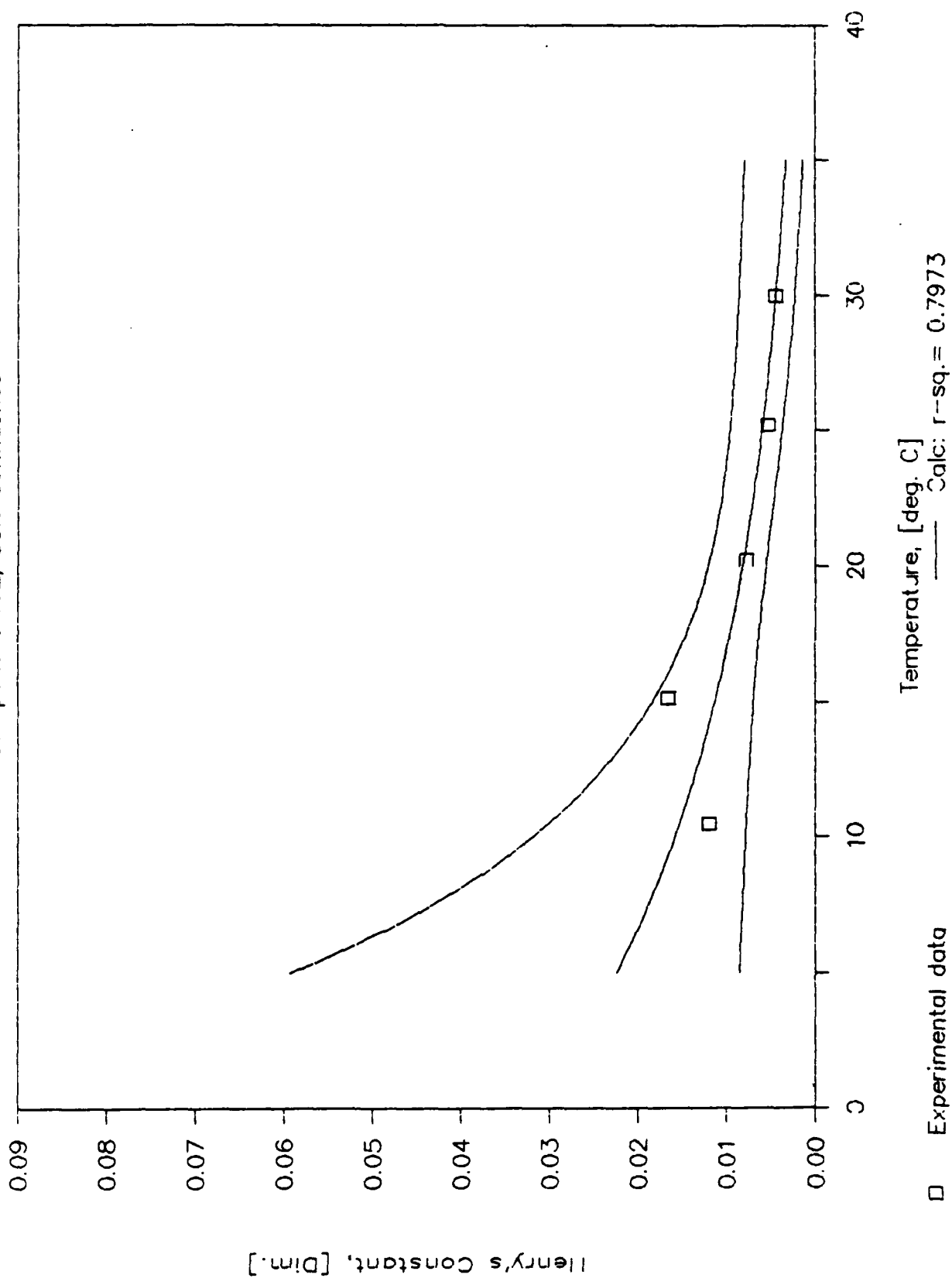
Temperature, [deg. C]

Henry's Constant, [Dim.]

□ Experimental data
—— Calc: r-sq. = 0.7973

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)		5		17		28	
REPLICATE ---)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		20		20		20	
Component ID		53		53		53	
Temperature (C)		10.1		15.1		19.6	
Low Vol (ml)		21		21		21	
High Vol (ml)		201		201		201	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0283	1.0E-25	0.0157	1.0E-25	0.0119	1.0E-25
H, avg: atm-mol/mol		36.6		20.7		15.9	
H, avg: atm-m3/mol		6.59E-04	1	3.72E-04	1	2.87E-04	1
H, avg: kPa-m3/mol		0.0667		0.0377		0.0291	
COV, r [std/mean]		28.47		2.80		35.36	
COV, both replic.		-----		-----		-----	
Observation:	(1)	0.0332		0.0162		0.0112	
[atm-m3/m3]	(2)	0.0370		0.0155		0.0171	
	(3)	0.0199		0.0160		0.0069	
	(4)	0.0232		0.0153		0.0125	
Injection:	(1)	59140		70407		105580	
[Peak Area]	(2)	53007		70262		101240	
	(3)	418840		574850		902890	
	(4)	407100		578660		854970	

		Temperature 4		Temperature 5	
RUN Number —)		18		6	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		20		20	
Component ID		53		53	
Temperature (C)		25		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0159	1.0E-25	0.0272	1.0E-25
H, avg:atm-mol/mol		21.6		37.6	
H, avg: atm-m3/mol		3.89E-04	1	6.78E-04	1
H, avg: kPa-m3/mol		0.0394		0.0687	
COV, r [std/mean]		36.14		11.55	
COV, both replic.		———		———	
Observation: (1)		0.0174		0.0237	
[atm-m3/m3] (2)		0.0092		0.0287	
(3)		0.0229		0.0257	
(4)		0.0142		0.0308	
Injection: (1)		128050		200340	
[Peak Area] (2)		134300		203720	
(3)		1034700		1532400	
(4)		1116900		1470500	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\# \text{ OF POINTS} = 5$$

$$\text{SLOPE} = -1.6E+02$$

$$\text{Y-INTERCEPT} = -7.2E+00$$

$$\text{R-SQUARED} = 0.0015$$

REGRESSION CONFIDENCE TEST

Component 53, 95% Confidence
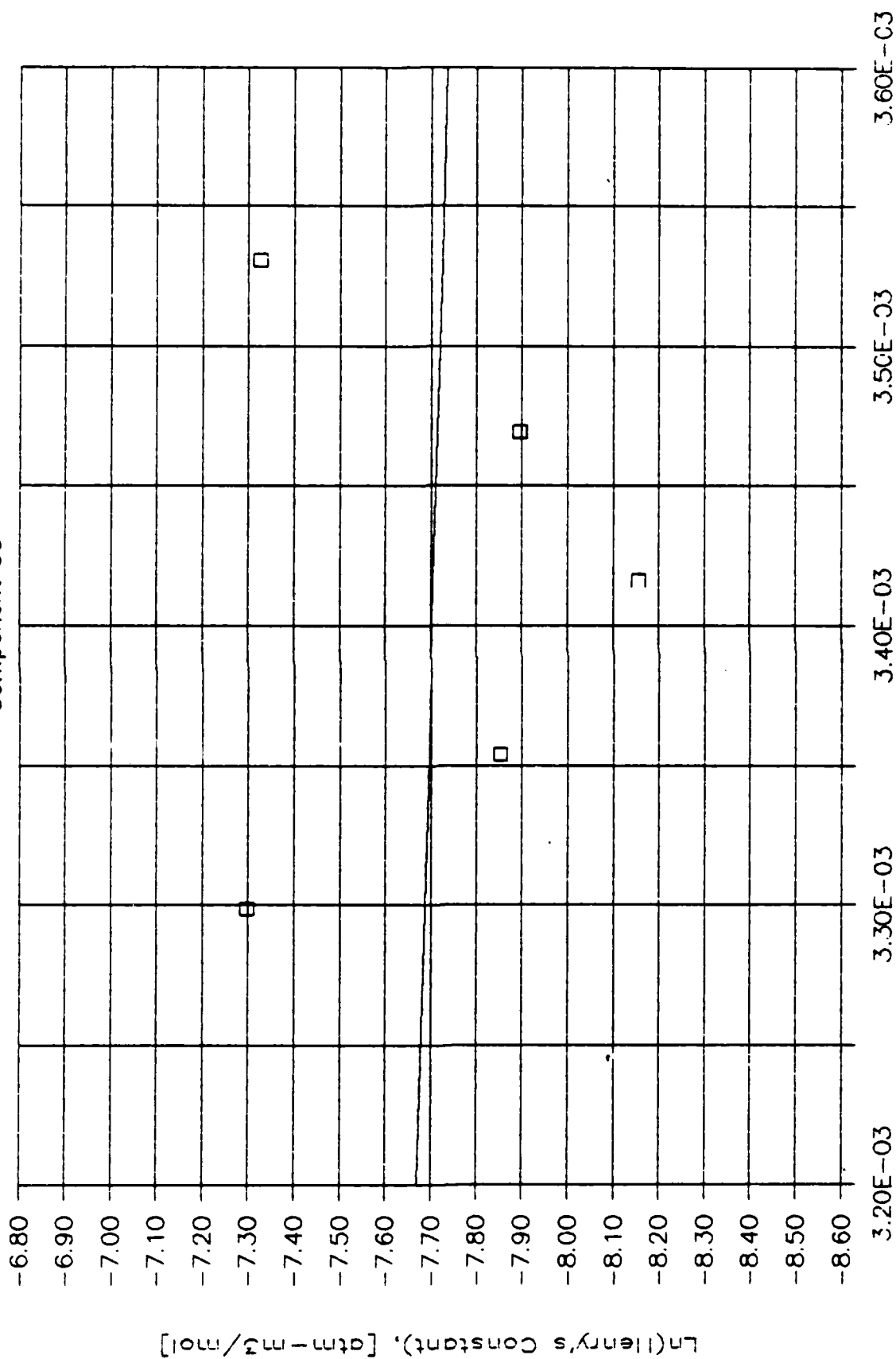
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data
——— Calc: r-sq. = 0.0015

TEMPERATURE REGRESSION PLOT

Component 53

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

□ Experimental data

—— Regr: r-sq.= 0.0015

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95% CONFIDENCE TEST
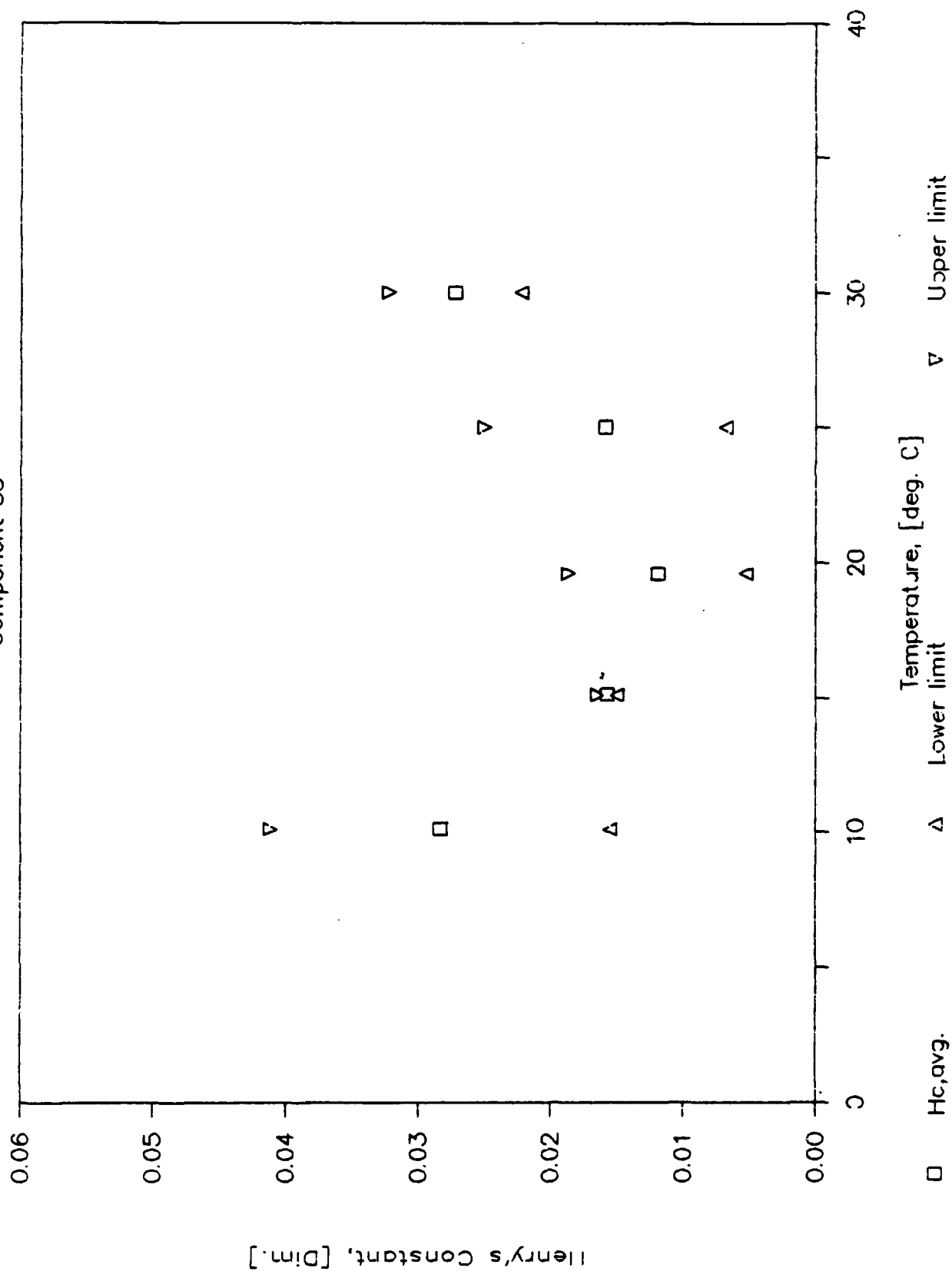
Component 53

		Temperature 1			Temperature 2			Temperature 3		
RUN Number ——)		7			24			33		
REPLICATE ——)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		20			20			20		
Component ID		153			153			153		
Temperature (C)		10.5			15.1			20.1		
Low Vol (ml)		21			21			21		
High Vol (ml)		201			201			201		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		0.0053	1.0E-25		0.0048	1.0E-25		0.0043	1.0E-25	
H, avg: atm-mol/mol		6.8			6.3			5.8		
H, avg: atm-m3/mol		1.23E-04	1		1.14E-04	1		1.04E-04	1	
H, avg: kPa-m3/mol		0.0125			0.0116			0.0105		
COV, r [std/mean]		60.64			18.25			18.49		
COV, both replic.		———			———			———		
Observation: (1)		0.0076			0.0047			0.0048		
[atm-m3/m3] (2)		0.0085			0.0038			0.0035		
(3)		0.0021			0.0059			0.0052		
(4)		0.0030			0.0050			0.0039		
Injection: (1)		83452			111840			161020		
[Peak Area] (2)		78971			113230			161670		
(3)		739210			1019700			1466500		
(4)		732630			1029200			1486400		

		Temperature 4		Temperature 5	
RUN Number --->		25		8	
REPLICATE --->		No. 1	No. 2	No. 1	No. 2
Group No.		20		20	
Component ID		153		153	
Temperature (C)		25.2		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0079	1.0E-25	0.0063	1.0E-25
H, avg:atm-mol/mol		10.7		8.7	
H, avg: atm-m3/mol		1.93E-04	1	1.57E-04	1
H, avg: kPa-m3/mol		0.0196		0.0159	
COV, r [std/mean]		19.09		28.96	
COV, both replic.		------		------	
Observation:	(1)	0.0085		0.0080	
[atm-m3/m3]	(2)	0.0062		0.0077	
	(3)	0.0096		0.0049	
	(4)	0.0073		0.0046	
Injection:	(1)	231040		319490	
[Peak Area]	(2)	233660		309630	
	(3)	2028300		2816900	
	(4)	2075400		2825900	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$ OF POINTS = 5

SLOPE = -1.8E+03

Y-INTERCEPT = -2.8E+00

R-SQUARED = 0.4058

TEMPERATURE REGRESSION PLOT

Component 153
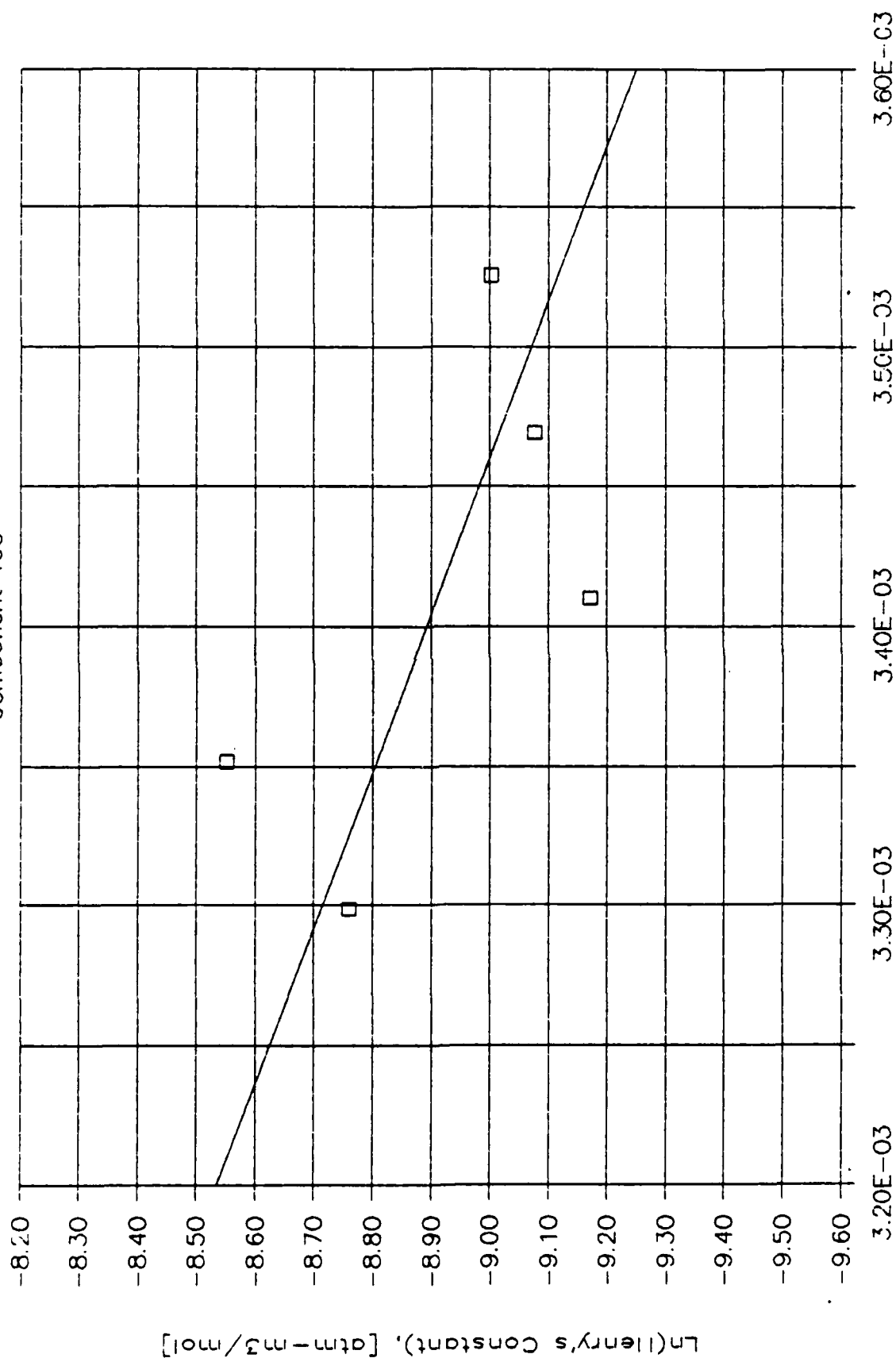
Experimental data
Regr: r-sq.= 0.4058

95% CONFIDENCE TEST

Component 153

Henry's Constant [Dim.]

Temperature, [deg. C]

□ Hc,avg. △ Lower limit ▽ Upper limit
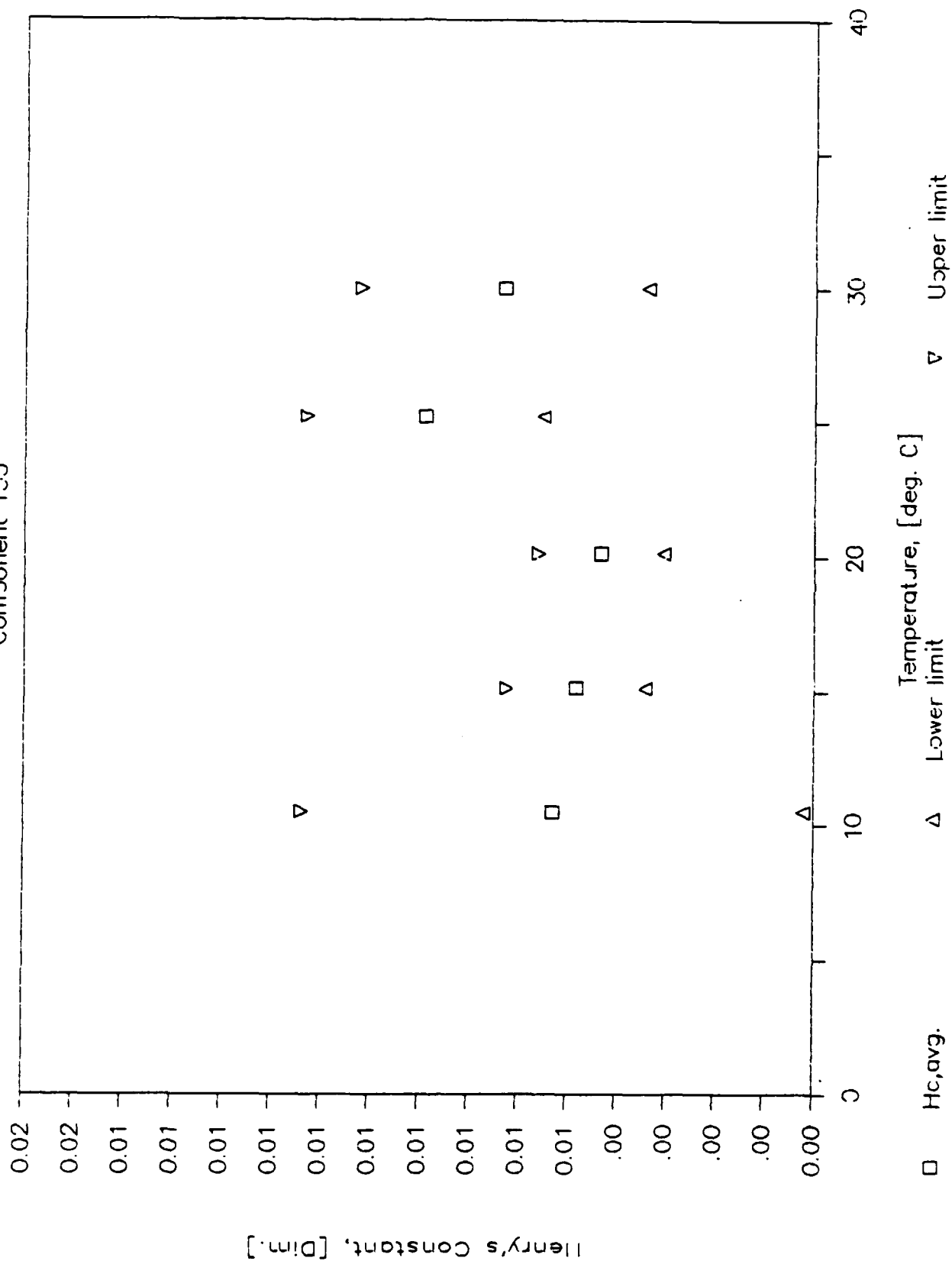
REGRESSION CONFIDENCE TEST

Component 153, 95% Confidence
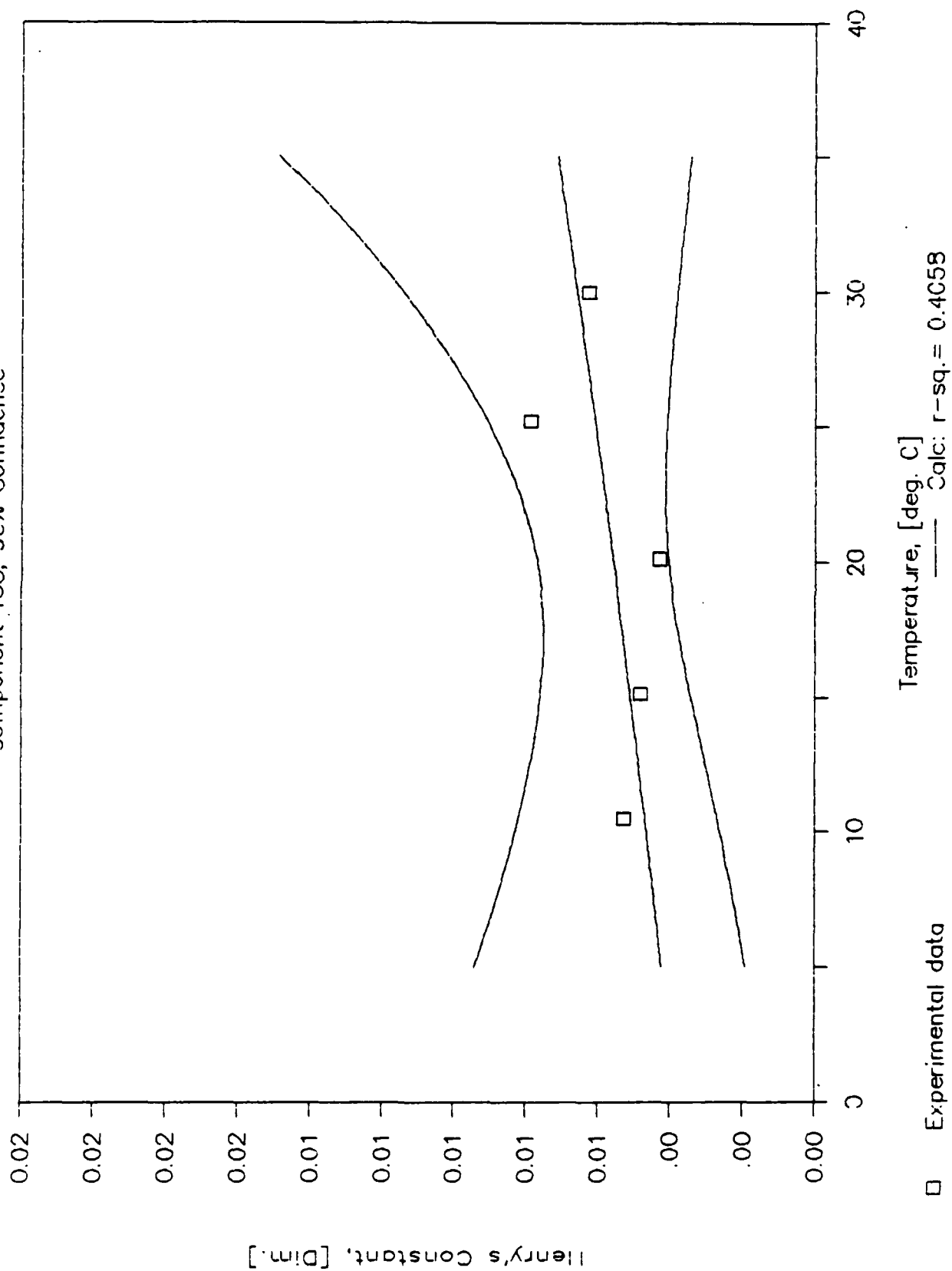
Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data — Calc: r-sq.= 0.4058

		Temperature 1			Temperature 2			Temperature 3		
RUN Number —)		9			21			33		
REPLICATE —)		No. 1	No. 2		No. 1	No. 2		No. 1	No. 2	
Group No.		20			20			20		
Component ID		54			54			54		
Temperature (C)		10.1			15.1			19.6		
Low Vol (ml)		21			21			21		
High Vol (ml)		201			201			201		
System Vol (ml)		250			250			250		
H, avg: atm-m3/m3		1.8980	1.0E-25		1.5346	1.0E-25		4.8118	1.0E-25	
H, avg: atm-mol/mol		2448.7			2014.9			6416.2		
H, avg: atm-m3/mol		4.41E-02	1		3.63E-02	1		1.16E-01	1	
H, avg: kPa-m3/mol		4.4700			3.6781			11.7125		
COV, r [std/mean]		33.20			16.07			32.33		
COV, both replic.		———			———			———		
Observation: (1)		2.3451			1.8051			6.7888		
[atm-m3/m3] (2)		2.5324			1.6763			5.2461		
(3)		1.3124			1.3750			3.9636		
(4)		1.4019			1.2822			3.2486		
Injection: (1)		55588			22968			49104		
[Peak Area] (2)		38139			19154			39079		
(3)		31469			15305			16631		
(4)		30072			16062			18401		

	Temperature 4		Temperature 5	
RUN Number —)	22		10	
REPLICATE —)	No. 1	No. 2	No. 1	No. 2
Group No.	20		20	
Component ID	54		54	
Temperature (C)	25		30	
Low Vol (ml)	21		21	
High Vol (ml)	201		201	
System Vol (ml)	250		250	
H, avg: atm-m3/m3	1.2640	1.0E-25	1.5326	1.0E-25
H, avg: atm-mol/mol	1716.6		2116.2	
H, avg: atm-m3/mol	3.09E-02	1	3.81E-02	1
H, avg: kPa-m3/mol	3.1336		3.8631	
COV, r [std/mean]	16.03		15.85	
COV, both replic.	——		——	
Observation: (1)	1.5094		1.8225	
[atm-m3/m3] (2)	1.1723		1.6266	
(3)	1.3335		1.4128	
(4)	1.0409		1.2685	
Injection: (1)	21149		48750	
[Peak Area] (2)	19435		41163	
(3)	15860		32285	
(4)	18883		34777	

ANALYSIS COMPLETED ...

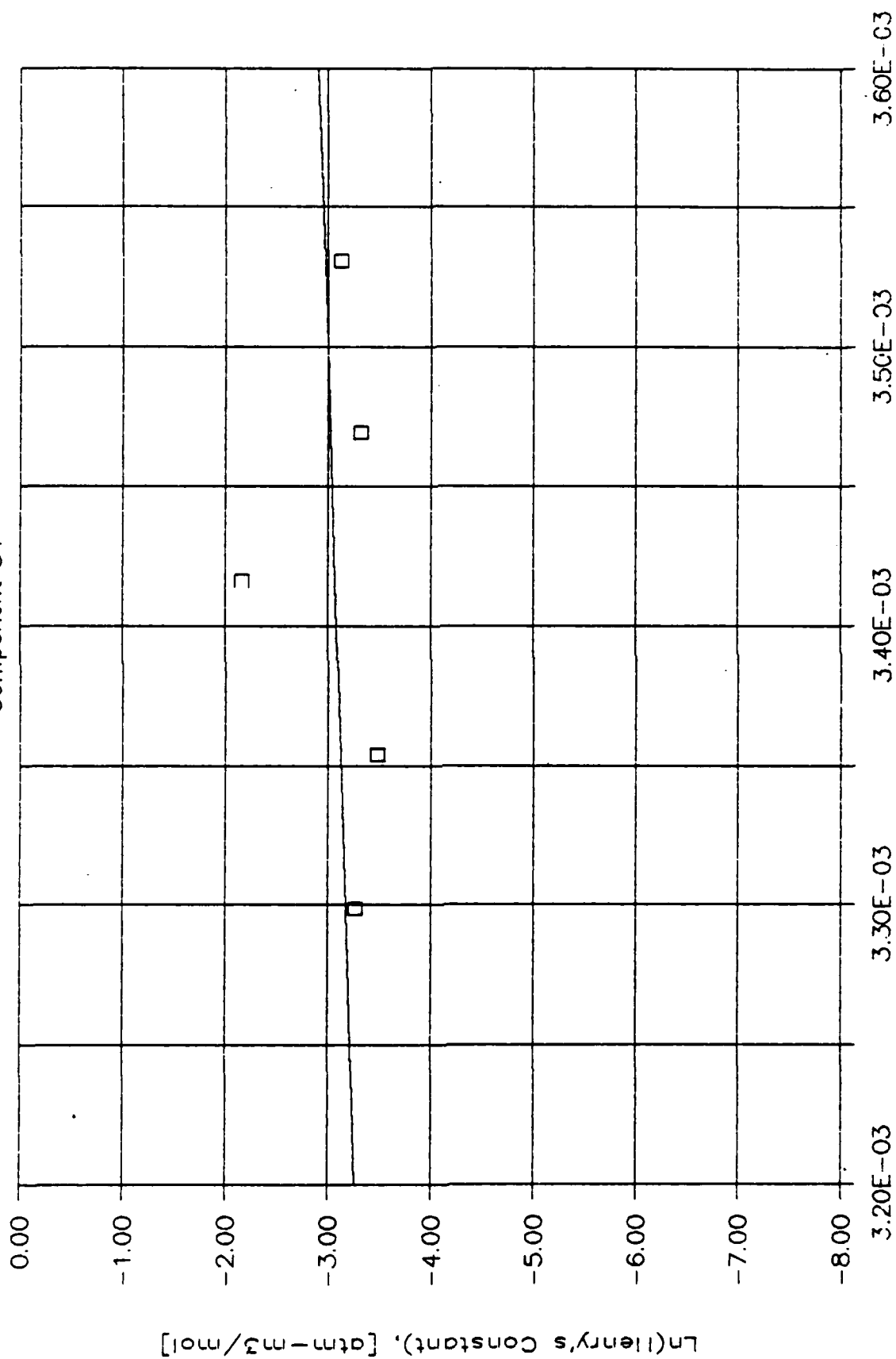Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = 8.7E+02$$

$$\text{Y-INTERCEPT} = -6.1E+00$$

$$\text{R-SQUARED} = 0.0233$$

TEMPERATURE REGRESSION PLOT

Component 54

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]
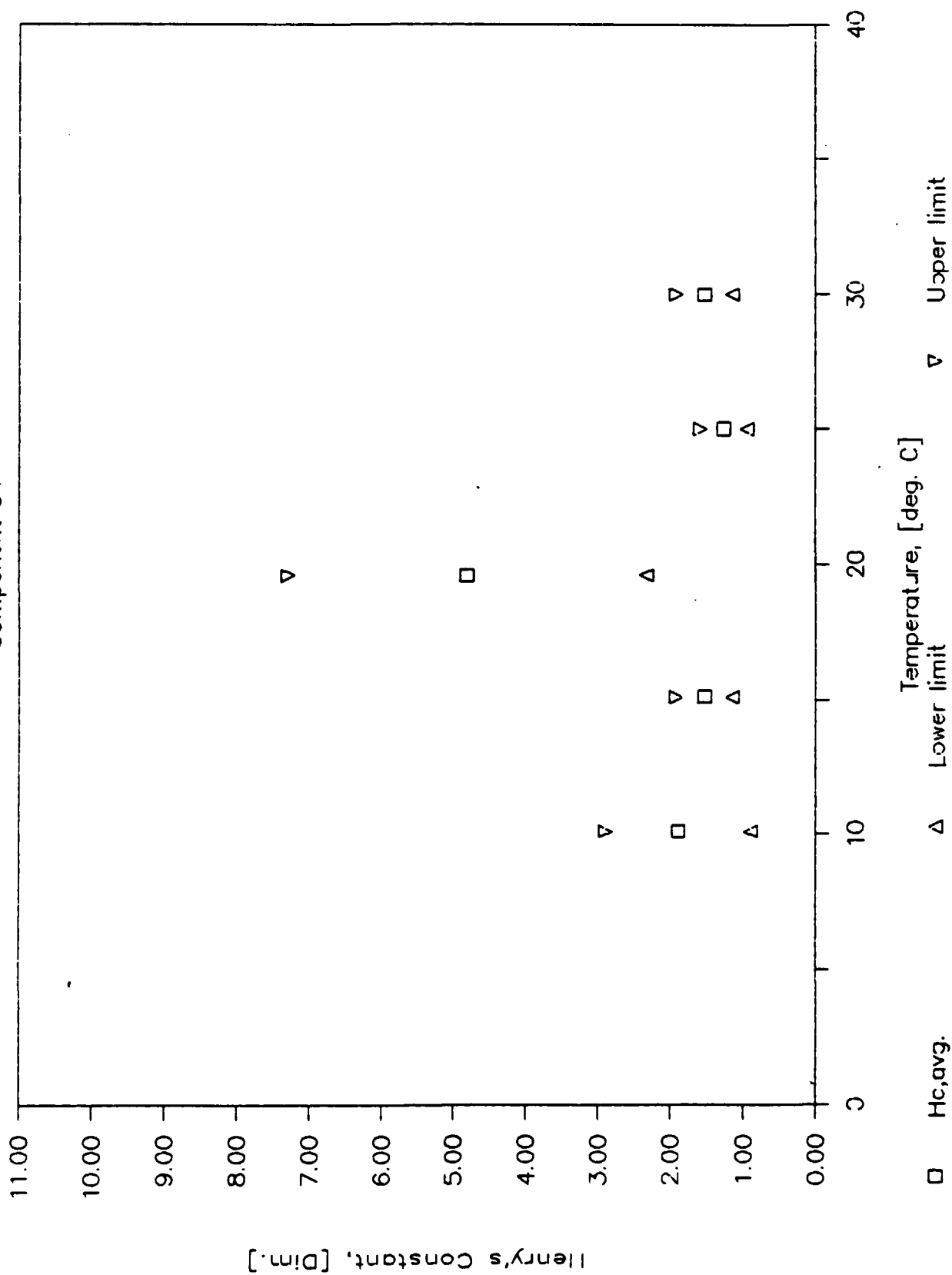
□ Experimental data
—— Regr: r-sq.= 0.0233

95% CONFIDENCE TEST

Component 54

REGRESSION CONFIDENCE TEST

Component 54, 95% Confidence
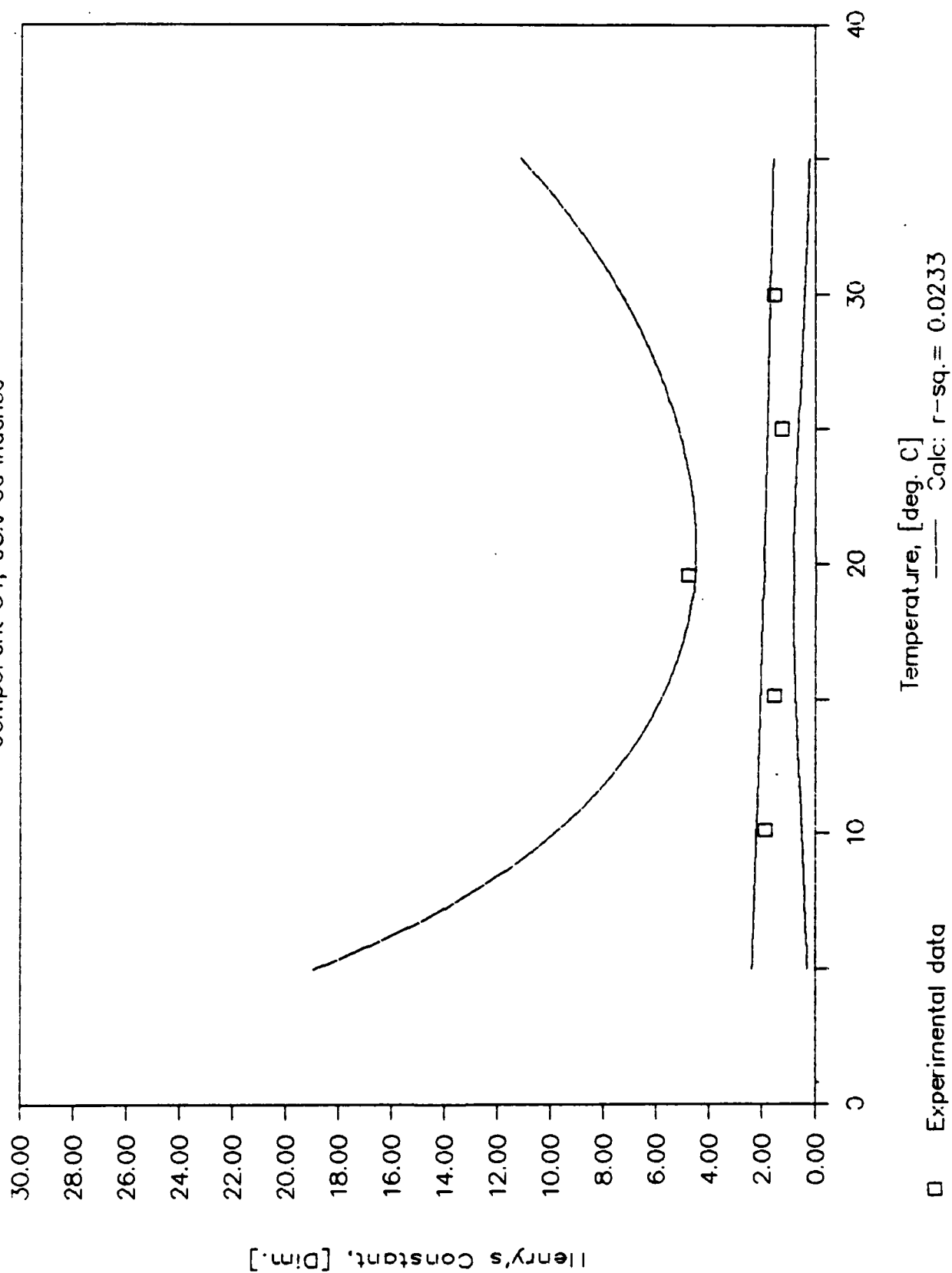
Temperature, [deg. C]

Henry's Constant, [Dim.]

□   Experimental data

——   Calc: r-sq. = 0.0233

		Temperature 1		Temperature 2		Temperature 3	
RUN Number ─)		2		10		2	
REPLICATE ─)		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.		21		21		21	
Component ID		55		55		55	
Temperature (C)		10.1		15.1		20.2	
Low Vol (ml)		21		21		21	
High Vol (ml)		201		201		201	
System Vol (ml)		250		250		250	
H, avg: atm-m3/m3		0.0537	1.0E-25	0.0067	1.0E-25	0.0299	1.0E-25
H, avg:atm-mol/mol		69.2		8.8		40.0	
H, avg: atm-m3/mol		1.25E-03	1	1.58E-04	1	7.20E-04	1
H, avg: kPa-m3/mol		0.1264		0.0160		0.0730	
COV, r [std/mean]		75.96		347.46		28.41	
COV, both replic.		───		───		───	
Observation:	(1)	0.0770		0.0293		0.0247	
[atm-m3/m3]	(2)	0.0986		0.0242		0.0209	
	(3)	0.0129		-0.0117		0.0391	
	(4)	0.0261		-0.0150		0.0349	
Injection:	(1)	4672		4779		6407	
[Peak Area]	(2)	2943		3194		7174	
	(3)	24768		34922		48590	
	(4)	22065		36418		50179	

		Temperature 4		Temperature 5	
RUN Number —)		11		3	
REPLICATE —)		No. 1	No. 2	No. 1	No. 2
Group No.		21		21	
Component ID		55		55	
Temperature (C)		25.2		30	
Low Vol (ml)		21		21	
High Vol (ml)		201		201	
System Vol (ml)		250		250	
H, avg: atm-m3/m3		0.0051	1.0E-25	0.0006	1.0E-25
H, avg: atm-mol/mol		7.0		0.8	
H, avg: atm-m3/mol		1.26E-04	1	1.38E-05	1
H, avg: kPa-m3/mol		0.0127		0.0014	
COV, r [std/mean]		92.84		697.60	
COV, both replic.		——		——	
Observation: (1)		0.0108		0.0045	
[atm-m3/m3] (2)		0.0034		-0.0021	
(3)		0.0067		0.0031	
(4)		-0.0004		-0.0034	
Injection: (1)		8564		10942	
[Peak Area] (2)		8230		10785	
(3)		73520		99903	
(4)		79100		107090	

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$$\text{\# OF POINTS} = 5$$

$$\text{SLOPE} = 1.6E+04$$

$$\text{Y-INTERCEPT} = -6.2E+01$$

$$\text{R-SQUARED} = 0.6716$$

TEMPERATURE REGRESSION PLOT

Component 55

Ln(Henry's Constant), [atm-m3/mol]

Reciprocal Temperature, [1/K]

Regr: r-sq.= 0.6716

□ Experimental data

95% CONFIDENCE TEST

Component 55

Henry's Constant, [Dim.]

Temperature, [deg. C]

△ Lower limit   ▽ Upper limit   □ Hc,avg.
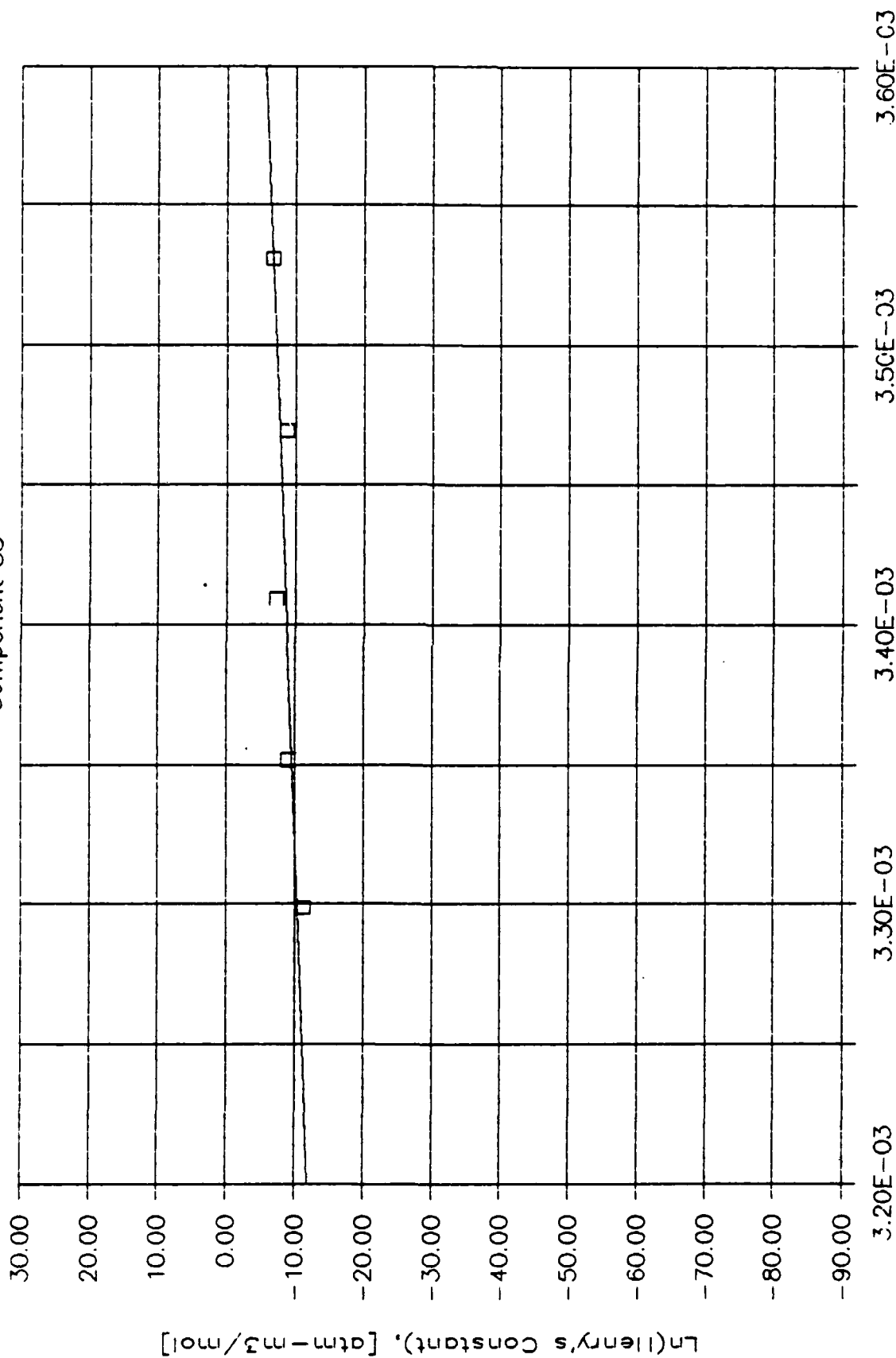
REGRESSION CONFIDENCE TEST

Component 55, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data ——— Calc: r-sq.= 0.6716

	Temperature 1		Temperature 2		Temperature 3	
RUN Number ---)	6		13		5	
REPLICATE ---)	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Group No.	21		21		21	
Component ID	56		56		56	
Temperature (C)	10.1		15.1		20.2	
Low Vol (ml)	21		21		21	
High Vol (ml)	201		201		201	
System Vol (ml)	250		250		250	
H, avg: atm-m3/m3	2.3040	1.0E-25	2.8738	1.0E-25	3.3397	1.0E-25
H, avg: atm-mol/mol	2972.5		3773.1		4462.3	
H, avg: atm-m3/mol	5.36E-02	1	6.80E-02	1	8.04E-02	1
H, avg: kPa-m3/mol	5.4263		6.8878		8.1459	
COV, r [std/mean]	6.47		0.57		1.07	
COV, both replic.	------		------		------	
Observation: (1)	2.1279		2.8547		3.3816	
[atm-m3/m3] (2)	2.2743		2.8682		3.3523	
(3)	2.3245		2.8793		3.3267	
(4)	2.4893		2.8931		3.2981	
Injection: (1)	172000		209970		223910	
[Peak Area] (2)	181510		210980		222000	
(3)	103300		106080		103230	
(4)	99185		105800		103700	

		Temperature 4			Temperature 5		
RUN Number ---)		15			7		
REPLICATE ---)		No. 1	No. 2		No. 1	No. 2	
Group No.		21			21		
Component ID		56			56		
Temperature (C)		25.2			30		
Low Vol (ml)		21			21		
High Vol (ml)		201			201		
System Vol (ml)		250			250		
H, avg: atm-m3/m3		4.1373	1.0E-25		4.8951	1.0E-25	
H, avg: atm-mol/mol		5622.4			6759.1		
H, avg: atm-m3/mol		1.01E-01	1		1.22E-01	1	
H, avg: kPa-m3/mol		10.2635			12.3386		
COV, r [std/mean]		1.75			3.86		
COV, both replic.		------			------		
Observation: (1)		4.1419			5.1031		
[atm-m3/m3] (2)		4.2265			4.7861		
(3)		4.0495			4.9993		
(4)		4.1314			4.6919		
Injection: (1)		261770			274740		
[Peak Area] (2)		258960			272320		
(3)		109070			104170		
(4)		108030			107120		

ANALYSIS COMPLETED ...

Temperature Regression Parameters:

$\#$ OF POINTS =   5

SLOPE =   -3.5E+03

Y-INTERCEPT =   9.5E+00

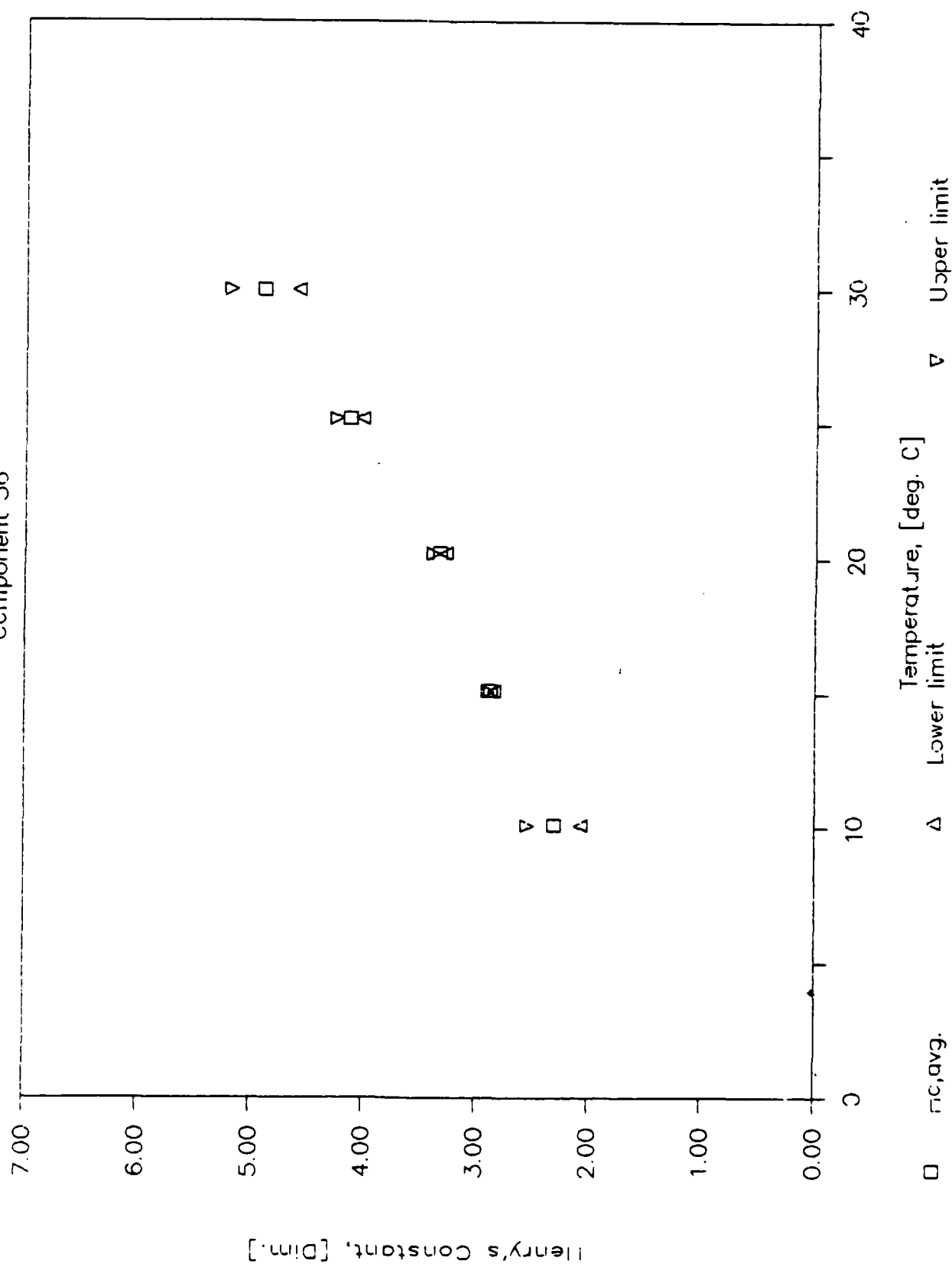R-SQUARED =   0.9975

TEMPERATURE REGRESSION PLOT

Component 56

Ln(Henry's Constant), [atm–m3/mol]

Reciprocal Temperature, [1/K]

□   Experimental data

─────   Regr: r-sq.= 0.9975
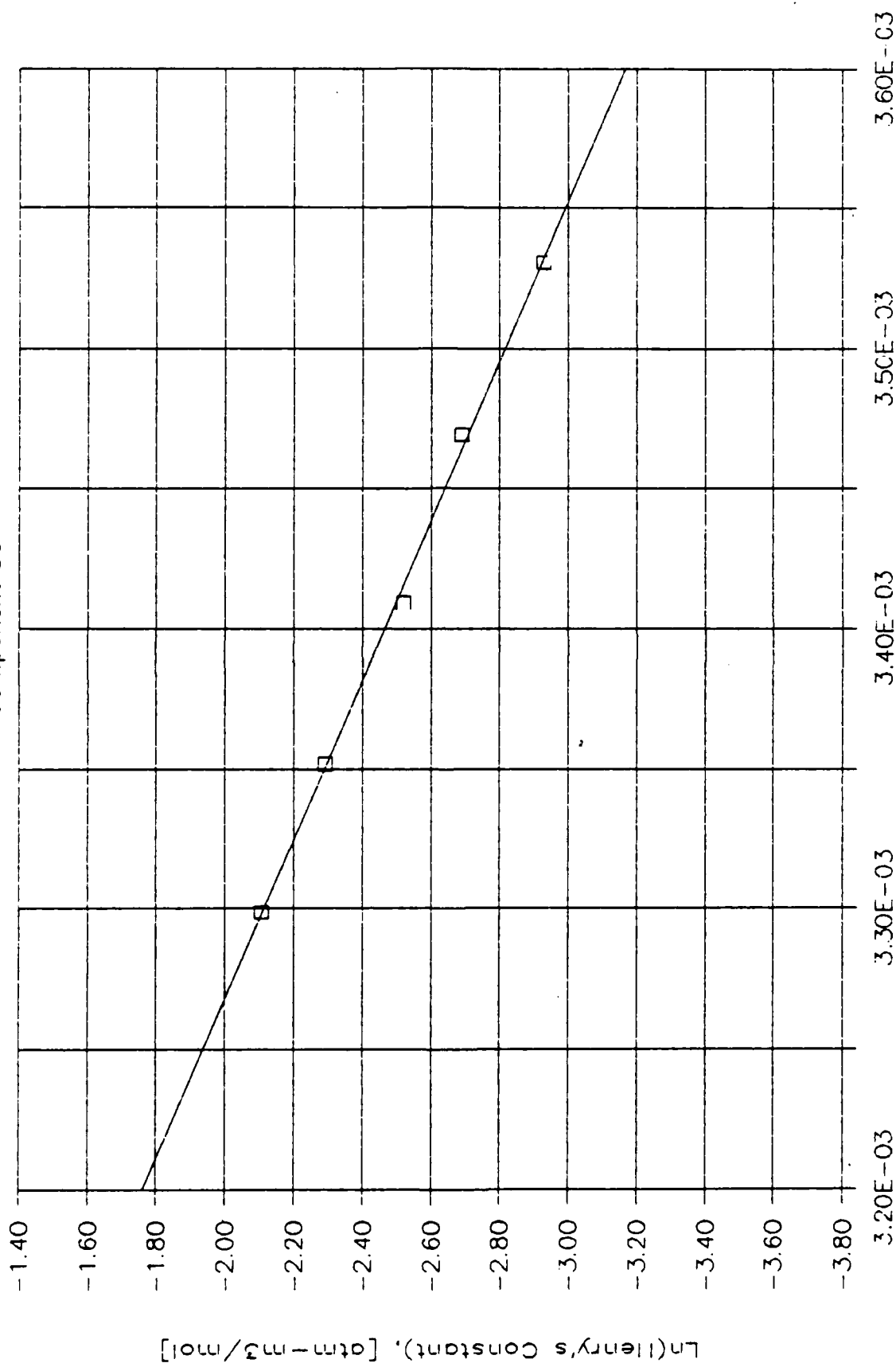
95% CONFIDENCE TEST

Component 56

REGRESSION CONFIDENCE TEST

Component 56, 95% Confidence

Henry's Constant, [Dim.]

Temperature, [deg. C]

□ Experimental data

——— Calc: r-sq. = 0.9975